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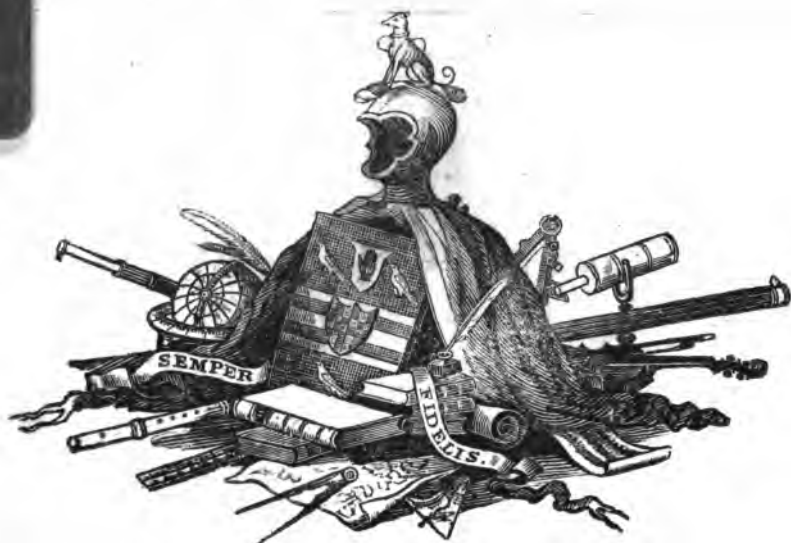
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LAVATER'S  
LOOKING-GLASS;

OR,

*Essays on the Face of Animated Nature,*

FROM

MAN to PLANTS.

---

DEDICATED TO

HER GRACE THE DUCHESS OF DEVONSHIRE.

---

*By Lavater, Sue, & Co.*

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The *wretch* that wears no smiles upon his face,  
And is not mov'd by honesty of heart  
To split his sides with laughter-loving dames,  
Who spread the Graces, as with sport and glee  
They mock the *miser's* melancholy mood,  
Till raptures soon intoxicate the brain;  
While Reason yields her empire for an hour,  
And says (as *Shakespeare* said for *John O'Combe*)——  
“ *Let no such man be trusted.*”——

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1800.



TO  
HER GRACE,  
GEORGIANA,  
DUCHESS OF DEVONSHIRE,

*This Volume*

IS MOST HUMBL Y INSCRIBED,

BY

*Lavater, Sue, & Co.*

a

*Lavater,*



*Lavater, Sue, & Co.*

TO THE

LITERARY AND FASHIONABLE WORLD.

---

WE commit some manuscripts to the press with diffidence, being sensible that, as pictures of the same objects vary according to each Painter's merit, so mother Nature has left a wide field for different descriptions of her beauties. We do not, however, pluck a wreath from LAVATER's venerable brow by prefixing his good Name to a Book that presents some of his interesting Sketches in a new point of view, with additional Observations on the Animal Creation; nor have we failed to assign to that eminent Physiognomist such a share of Profit upon it as shall be deemed consistent with justice, esteem, and fellow-feeling for him, at a moment when he is suffering in the

2 2

cause

cause of his much-injured country,—Switzerland.

Upon this honourable ground, where we commit no depredation upon any privileged property, nor even blindly follow that great Professor in all the flights of Fancy, we think it incumbent on us to use the preceding Title, and adopt the Signature of LAVATER, SUE, & Co. for our joint benefit, in order to announce the real founders of a repast intended for liberal minds.

Were the whole found agreeable to the wise order of things, it would be needless to trace any further the hearts which beat high with zeal to cultivate the neglected Art of Reading Faces, from a conviction that it might be rendered equally pleasant and useful to the thinking part of mankind.

Nay, there are enlightened men, bred in the LAVATERIAN School, and buoyed up with faith in doctrines superficially considered, or lightly condemned, upon vulgar notions and popular prejudices.—

dices.—To them it is unnecessary to say, what they know, that Dr. SUE is honourably mentioned in LAVATER's Treatise on Osteology, as a Man distinguished for Anatomical Knowledge, and as a Member of the most learned Societies, at Home and Abroad.

Suffice it, therefore, to add, that it is his Essay on Living Creatures, with variations, or, at least, SUE's ideas clothed in the British language of freedom, that we submit, with our respectful appeal, to the Public Tribunal.

This Analysis of that Work has been made under the impression of experience,—that exhibitions of naked truth applauded in France, were ill calculated for the pure manners of Britain, where Grecian Statues want a veil adapted to English delicacy.—Thus, whatever imperfections Critics may find in our attempt to embellish Surgical Remarks, in a System founded on French and German ground-works, we trust, that even they will give us credit for our endeavours to please  
and

and instruct the rising youth, without offending the chastest ear.

Indeed, as our Pen has not been accused of flattery, we trust, that it will never be disgraced for raising unpleasant feelings in any breast.

*Lavater, Sue, & Co.*

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**INTRO-**

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## INTRODUCTION.

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**S**EVERAL protectors and professors of the fine arts have approved of our researches respecting the passions and their expressions: we have therefore thought it incumbent on us to comply with their wishes, by communicating the result of further inquiries, after having fully treated this important matter with respect to art and nature, painting and physiognomy.

It is with a view to general utility, more than from a desire of gaining fame, that we present a series of observations paving the way to discoveries. —In these Essays every article may be considered as a step leading intelligent beings to a better light, where they will attain the summit of their pursuits, by feeling themselves convinced that all living creatures have a set of features and complexion, forming so many pages of that great book of Nature which it is our duty to learn;—nay, the perusal of it is so much the more easy, as it is a delightful task to gratify that innate passion, the strong curiosity to know ourselves.

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Even

Even with the dawn of reason, does not a child pretend to judge of faces?—At every stage, are not the penetrating eyes of a man directed to find out the secret thoughts of the stranger whom he meets?—And do we not daily hear it said, as an incontestable truth, that such-a-one is lively, dull, thoughtful, peevish, melancholy, &c. merely from a glance at his exterior appearance?

Certain it is, that the human form, particularly the countenance, is stamped with a distinguishing mark, by which the mental emotions may be discerned; the body being justly called a substantial image of the mind, or the soul itself rendered visible. It is, likewise, universally acknowledged, that the improvement of talents ought to be the first object of our studies; for Genius produces such master-pieces as reflect honour on his creative power. Beauty asserts equal rights to the productions of the liberal arts, because the colours, so often employed to paint the Graces, are embellished in those hands which had been only deemed fit to use the needle; insomuch that a living model of perfection, a Venus, may take up the painter's pallet, and fill his place.

Besides, how is it possible that the fair sex should fail to excel in painting, since the charming eye pierces through the most intricate lineament, and seizes the likeness without missing a shade of distinction!

Let, however, the strong passions be still expressed with bolder strokes of art from the firm hand of man;

man; but it would be difficult for him either to see, conceive, or take off moving figures in a lively scene, where love and harmony combined to direct the powers of retracing youthful looks, grace and motions keeping pace with the pulse of sensibility.\* These varying beauties are best reserved for woman's gentle touch and refined feelings.

Indeed, we might support our assertions, by mentioning many striking instances of superior excellence in the fairest part of the creation; but we shall only dwell, at present, on those heroic actions by which French women have immortalized their names during the late memorable revolution.

Buoyed up above the fear of death by sentimental courage, they carried to the highest pitch

\* We have given an imperfect imitation of Dr. Sue's following compliment to the fair sex. *Avouons, (says he), que les mouvements doux, délicats, légers, & mille détails que l'homme ne distingue pas, ou qu'il craint d'approfondir, sont réservés au sentiment aussi courageux qu'admirable, & à la touche fine & ingénieuse des femmes.* On this occasion a fair lady can best determine, whether we have raised the same sensations in her breast, by an allusion to some of those thousand graces which the French physician left to our imagination; but in order to convey his idea beyond the literal meaning, it struck us, that we ought to imagine such a lively scene as is represented in the Dancing Hours, of which a copy is in our possession; and as the original picture is painted on a ceiling in the Rospiglioso Palace, we suppose that it has not yet followed the victor's triumphal car, as other precious monuments have done, and will ever do, so long as the fine arts are esteemed and cultivated.

that enthusiasm, which was the source of such generous sacrifices as dignified misfortunes, by proving a legal title to that empire of our hearts, which they were before supposed to have usurped by their charms.

Be that as it may, we must take notice of similar treatises written by our predecessors; but as the greatest part of them contain a mixture of false principles with truth, we need only mention, in the first place, Galien's judicious Reflections, with Le Brun's excellent Treatise on the Passions, the Philosophical Enquiries of Descartes, Diderot's posthumous work on the Art of Painting, Baroness de Staël's Considerations on the Happiness of Nations; and, above all, Lavater's Essays on Physiognomy, a production that forms an invaluable record in the history of mankind. Indeed, too many encomiums cannot be bestowed on this last eminent writer, whose judgment appears in his choice of romantic views, presented to the world as a set of fragments, without order, because he felt the difficulty of an attempt to compleat a regular system, on a grand scale, adapted to such sublime ideas as overleaped the bounds of art.

It is true, indeed, he saw men and things through a medium ill-suited to common eyes; yet, since he collected a mass of materials sufficient for the foundation of a more perfect theory than his own, there is room to hope that he will form it, by following

following the train of thoughts suggested; for it might be dangerous to build castles in the air, without knowledge founded on repeated experiments.

Let us, nevertheless, acknowledge the satisfaction and instruction received from that *great professor of physiology*, while we pass over in silence the flights of fancy, the visions of an eccentric character, and the errors of an honest man, whom we love, respect, and admire, much as we may differ from him upon essential points.

He it was that earnestly recommended anatomy to painters, physiognomists, and all those who wish to know themselves, and study the human frame.—Indeed, he excelled in that liberal art; and, when young students find him express his regret for not having cultivated it sufficiently, they will feel the necessity of devoting their time to a science so closely connected with their professions.

The advantages to be derived from a literary Essay of this kind, cannot be represented in a fairer light, than by supposing the case of a pupil employed to paint a sea-port, containing inhabitants from different countries; an island full of various animals, with several kinds of plants; or a battle between troops of two contending nations: such a youth will flatter himself with the vain thought of having justly delineated the objects in question, by

taking off the superficial view of living creatures, with the dress peculiar to each nation,

But naturalists will inform him, as we do, that between one cast of people and another there are shades of difference, as well as through the whole creation, from man and beast down to the plant.

For instance, a Dutchman's skull is rounder, has larger and more regular bones, with the hollow part about the cheek bone not so even as others,

In like manner, animals and plants, of the same country and species, differ remarkably in colour, size, constitution, and length of life.

Historical painters and limners will appreciate remarks of this sort and others, abundantly supplied by Lavater. From such stores we shall occasionally chuse a portion, in the course of our following meditations.

LAVATER'S

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# LAVATER'S LOOKING-GLASS.

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## ESSAY I.

*On the Necessity of Studying the Constitution of  
Living Creatures, and the Imitative Arts.*

**A**T an exhibition of pictures, the majority of spectators is captivated by lively colours, over-strained forms, and extravagant embellishments. So long as their senses and foibles are flattered, they gaze with pleasure at a dauber's painting, which will not stand the test of a discerning eye, when it comes to be appreciated by the standard of true taste and judgment.

But men endowed with these qualities will find out a master-piece, that has been slighted or unnoticed by vulgar eyes.

Their raptures, then, proceed from admiration of just design, true likenesses, comely looks, and every trivial appendage that strikes them at once in a picture, where, with one glance, they see art approach Nature's fairest shape, so far as to renew, on their minds, the impressions made by the real ob-

jects represented. Yet, while the best master-pieces are not valued in France so much as in other countries, the artists have reason to complain of injustice done to them in that respect; because, in so difficult a profession, the qualifications, application, and information required, exceed any idea conceived by people not conversant with arts and sciences.

Nature is a stingy mother, and dispenses with a sparing hand the noble talents necessary to imitate her complexion, motions, and expression. She has bestowed on Genius alone that free gift, the divine flame which forms her strong colours and grandest features. An equal degree of perfection cannot be attained merely by dint of labour; yet the heavenly spark, producing such happy effects, is indebted to industry for giving full scope to invention and imitation. Thus an artist would grope in the dark for ever, without accomplishments derived from additional principles, equally indispensable as the technical rules that he follows. We allude to a knowledge of history, mythology, or the fables of the heathen gods, and anatomy; for a man who practises a liberal profession, unless he be a proficient in these matters, must be condemned to live in perpetual obscurity.

Many arguments are needless to prove surgical knowledge a prime requisite in a painter, as he would labour in vain to represent the most delightful

ful situations and varied prospects, were he not capable of drawing and describing all the component parts of the human body. Nay, how cold, dull, and gloomy, would his landscapes appear, without being enlivened by the presence of living creatures, especially man, the most perfect being that came from the Creator's hand !

Nothing so clearly demonstrates the utility of the science of anatomy, as the special care taken by the first masters, in all ages, to acquire a proficiency in such a collateral branch of their respective professions.

It was thus that Raphael, Michael Angelo, Giulio Romano, the Carracci, Dominichini, Le Brun, Le Sueur, and other painters, sculptors, and architects, immortalized their names. Indeed, so persuaded was Michael Angelo of the importance of anatomical observations for improving the imitative arts, that he formed a design of publishing a compleat treatise on the muscular motions. What a loss to the republic of letters that his project was never executed ! For who better than him could have given useful lessons upon a subject that he had long considered in the most pleasing point of view ; since there never was his equal for joining the clearest theory to the most compleat execution ? His superior abilities are still displayed in all those monuments of Roman grandeur which came from his pencil or his chisel, and have excited the admiration.

miration of every age by their striking beauty and exact symmetry.

Consequently, in conjunction with Leonard de Vinci, that great master was best qualified to establish, as he did, those famous academies in Italy, which even Raphael did not disdain to consult.

Hence the principal qualification for just designs appears to be derived from an attentive study of the *human frame*, considered in all its parts, postures, and points of view. The student must therefore see, direct, or perform the chief surgical operations, so far as to sift into the maze or inner works of that *astounding machine*, while he slackens or loosens the muscles, and proves, by feeling or ocular demonstration, the existence even of the slightest excrescence, tallying with the models before him. He should observe minutely how different particles of the bony system are put out of order, and wound up again by adding fresh springs to the muscles; and it is equally necessary for him to make other experiments, to discover the outward effect of interior changes in the *grand clock-work* in question; for, when the causes are known, their effects can be more justly delineated.

Nature is most faithfully copied by a painter that sees her secret works through a veil, becoming transparent in his eye after he has studied anatomy.

A single look then suffices for him to take off the likeness of those visible objects, which he fixes on his canvases with equal fidelity and precision.

It

It is not, however, less true, that practitioners only can form a just conception of the time required to impress upon a spectator's mind, such a delusion as to make him imagine that an admirable masterpiece was produced by bold or sudden strokes of art; but when merit meets with applause from those who know the pains taken, and difficulties overcome, it affords the most acceptable recompense: yet the cool indifference that most people feel in seeing Nature displayed, produces in them the same insensibility whenever they review a just representation of her fairest works; for a strict resemblance between such copies and originals only serves to renew sensations familiar to vulgar minds. In that case the painter would be less meritorious, were he more applauded by the ignorant class, whose example in high life renders it sometimes unfashionable to take much notice of paintings, where every object bears its natural appearance.

You, then, young pupils, who have an honest ambition to rise and make a figure in the world, above all things fail not to study Nature. Read daily some pages of her volumes, and set no value upon other books, unless they are commentaries of her superior work. Yes; the human body alone contains a compleat system of anatomy\*, which

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\* ON ANATOMY.

Anatomy reveals great Nature's plan,  
Displays on earth the majesty of man,

you

you should always have before your eyes, as the subject of contemplation, and the means of attaining perfection

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Whose curious frame betrays the power divine,  
 With God's own image stamp'd on every line  
 Of features, glowing with a soul refin'd,  
 To prove the face a mirror of the mind.  
 Upright, he moves along with solemn pace,  
 Looks up to Heaven, or courts the kind embrace  
 Of blooming Love, whose temple he admires;  
 While Venus smiles, inspiring warm desires,  
 Adorned by Flora, by the Graces drest,  
 Like mother Eve, by Adam kiss'd and blest.  
 Their paradise, replete with heavenly joys,  
 Supplies the modern race of girls and boys;  
 Endear'd by ties of blood and tender hearts  
 To Æsculapius, who reviews the parts,  
 Where Death too soon designs his fatal blow,  
 To crop the flow'rs, which wither as they grow.  
 Thus Art to mortals shews the book of fate,  
 Where cowards may their doom anticipate.  
 Has *Hunter* shewn how babes fill every vein,  
 Suck in the womb, and fortify the brain;  
 How stamp'd on each created living breed,  
 The leading marks discover ev'n the weed?  
 The drugs that *Bulkley* sells, or *Jones* refines,  
 Flies, plants, and cochineal have varying lines;  
 Up to proud man, who, sov'reign lord in name,  
 Calls God most high designer of his frame.  
 This truth will *Campbell* feel, and *Thynne* impart  
 In feeling language suited to the heart;  
 That science best refines the joys of sense,  
 And proves in all the wise Omnipotence!

What

perfection in taking off men and animals as they really are, in the various attitudes required; to mark the common effort of all the limbs and parts, tending to one united motion of the whole creature, and proceeding from an over-ruling will, pushing on, in perfect concert, every particle that contributes to perfect his views.

The very intention, as well as the act of moving, should also be ascertained and delineated by a good painter, who knows that all these circumstances cannot be properly represented without an adequate knowledge of the bony and muscular systems.

In short, how many objects would never have been copied upon canvass, brass, or marble, had not the dissector paved the way through that labyrinth which forms the ground-work of the whole animal creation? Without such light, an artist would resemble a man blind-folded, with his genius blunted, and brilliant ideas stifled before their birth; for,

What glorious works are seen in every page  
Of Nature's volume, teaching youth and age,  
Clear as the sun, refulgent light of day,  
That darts at mortal eyes his sacred ray.  
Let, then, the study of mankind be freed :  
To strike the lifeless bosom, think, and read  
The records of creation, with the store  
Of beings, quick or dead, in days of yore ;  
For, tracing out the ways of Providence,  
Knowledge will yield fair Virtue's recompense.

unless

unless he knew the exact length, form, and use, of every muscle, it would be quite impossible for him to take off justly any motion depending on inward springs.

ESSAY

## ESSAY II.

*On the Dimensions of the Human Body, and Distinctions, according to Age, Sex, and Country.*

BY fair proportions of the human frame, we understand due symmetry, or just measure of each part, compared to the whole ; together with their respective connections, relative to the different uses of all parts.—In this respect Nature varies infinitely, as she does in all her works ; for, comparatively speaking, we find that the same members will not be found of equal size in two persons, nor always a man without a limb, or some other particle, ill matched with the rest.

Authors who have treated the art of Painting, have laid down sure rules for the purpose of ascertaining justly all those measures upon a general scale ; yet the standard of excellence, thus formed from observations, does not only originate in a variety of good models, but is likewise the effect of true taste, founded on our innate knowledge of conscious natural beauty.

Thus, when Zeuxis was at a loss how to furnish a picture of Helen, he reviewed the most celebrated Sicilian beauties ; chose one perfect leading feature  
from

from each of them, and mingled all their charms to form the fair paramour of Paris.

In like manner Phidias, the sculptor, united in Jupiter's statue the various perfections of a thousand living models.—It was in the same way that the most ingenious men of ancient Greece transmitted to posterity a criterion, by which we have learnt to value Nature's glorious works. Consequently Grecian statues, being mere copies of human figures, are considered as displaying an original type of perfection, far exceeding what is ever found in a single living individual. Hence came the rules of beauty adopted by painters, and too numerous to require a particular discussion in this stage of our inquiries.

The Variations are according to age, sex, and country. At the critical period when Nature communicates the spark of life, her system is invisible. In vain would the curious eye attempt to penetrate her wisdom in the first stage: nor is it possible for a painter to penetrate the great work in embryo. Let us, therefore, pass it over in respectful silence until the time of maturity, when it presents a subject to be considered in three points of view.

Infancy extends from a child's birth till it is twelve years old. The middle term is when his figure begins to appear in such a state of innocence as commands the limner's attention. In the first, second, or third year of existence, the feeble frame is not so completely formed as to be called perfect.

More

More promising than beautiful, the infant then exhibits only a faint sketch of his future self.

At six or seven years of age his childish looks give way to signs of growing youth.

But were a painter to know no more of his profession, than merely to diminish the different proportions in all the members of the human body, without making an allowance for the difference of age, he would draw the likeness of a little man when he attempted to furnish the picture of a child. For instance, in a full-grown lad, the *os pubis* is in the middle of his body; but when he came into the world, half his measure was at the navel.

There are other distinctions peculiar to childhood. New-born infants have the head disproportioned to the other parts, with plump cheeks, hands puffed up, arms, legs, and thighs *en enbonpoint*. Their muscular fibres are separated by a ground-work of slight strings, interwoven in such abundance as prevents them from giving full tone to the muscles, and stretching their tender limbs.

In drawing an infant, the ancients were mere bunglers, although they excelled in painting a full-grown person. Their clumsy diminutive figures prove, beyond doubt, that they had few opportunities of seeing perfect models of childhood, but were struck with the constant sight of the most athletic and handsome Greeks at the olympic games, and other diversions of their days, where they appear to

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the greatest advantage. Nay, among modern painters, Domenichini was the first who gave to the pictures of babes, that grace, and those delicate touches, which Nature has lavished on them. He seized that true likeness which his predecessors could not attain.

It is in their sixth or seventh year that children exhibit a fine but unfinished sketch of MAN; and as it is only then that they begin to grow handsome, people who are nice upon this point agree in opinion, that they ought not to sit for their pictures at an earlier period, according to the custom of former times.

At that early age, a living beauty served as a model for Cupid's much admired statue at Thespia, equal to the Venus of Medicis; and a comely lass, not younger, sat for a picture of the Goddess of Love, drawn by Hannibal Carracci, and representing Danaë, while Jupiter descends in a cloud with a shower of gold.

While boys and girls are growing, their stature increases gracefully, more in height than breadth, or bulk. The limbs are slim, the muscles are disentangled, the whole human frame by degrees discovers the fair mould wherein it was turned without a blemish. When the full natural size is attained, a comely complexion receives fresh embellishments from a cheerful mind, good living, and a constant  
flow

flow of spirits. Having reached the highest enjoyments and most pleasing endearments of life, man then displays his vigorous and majestic form, as lord of the creation.

Manhood is equally marked with such striking shades of variations as will not escape a painter's eye. At that period, corpulency often overstrains features, once so regular; the limbs become unwieldy, while the muscles are encumbered and checked by changes affecting the whole system: yet, much as an excessive corporation disfigures the lines of grace and elegance, a moderate share of comeliness is very becoming.

Men do not pass rapidly from the vigour of life to the vale of years. If at fifty they begin to go down hill, they frequently wear so well as not to be old in constitution.

It is, however, about that age, and until the fifty-fifth year, that their decline is first perceptible. Plump and jolly looks give way to wrinkles: for want of sufficient elastic tone through the whole frame, the skin, like cloth, takes a rougher plait, particularly on the cheeks and forehead. At last a bald, furrowed brow; a pale, shrivelled, toothless face, and bones jutting out, are signs of approaching dissolution. Even the stature diminishes. A giant's spine, or main pillar, sinks under the weight of years. His muscles become too weak to glue together that chain of Nature's system; the joints of

his legs and arms, being grown stiff, refuse to perform their duty.

Other symptoms of final decay announce a skeleton by anticipation, while death waits in ambush, impatient for his prey.

Let us return, with due respect, to the fair sex.

A personable woman, well shaped, is more slender, and has slighter bones, than a man ; her stature is likewise smaller, the neck longer, with the lower part of the breast narrower.

The base or circumference of Venus, taken in one point of view, is also broader, compared with the form of Apollo. Her thighs are thicker, her legs stouter, her feet smaller, her muscles less visible, and her limbs more elegantly turned, in addition to a set of features and complexion peculiar to the beautiful object of wedded Love.

In the next place, we come to consider the material difference depending on climate, with regard to the size and colour of people.

A good painter will not, we know, draw a Patagonian like a Laplander, nor make an European resemble an African blackamoor. He will take off the national distinguishing feature perceived in every country. In his pictures, the Frenchman, the Englishman, and the Circassian, must appear as they really are, formed in Nature's fairest shape ; while the Calmouck and Greenlander should be represented in their true light, with diminutive eyes, shapeless

shapeless faces, and hollow nostrils. The Carribee should likewise be distinguished by his flat skull and piercing eye.

Some distinctions are merely artificial. We shall slightly mention instances of particular caprices.

The original inhabitants of Guiana look upon a long neck as a deformity; they, therefore, begin betimes to take great pains in making that part fall into the breast, so as to bring their sight upon a level with the shoulders.

The native Peruvians and Brasilians bore their noses, nostrils, lips, and cheeks, for the purpose of wearing fish-bones, plumes of feathers, and other ornaments; while others pierce those parts and their eye-lids with needles, or wear very large rings around their mouths.

The Omaguas flatten the faces of their children, by pressing them between two boards. Boring a large hole in each ear, they adorn it with a nose-gay of flowers or herbs; and this fashion of extraordinary ears prevails in all oriental countries.

The Hottentots bruise the noses of their children; for to them a too prominent striking feature would be a deformity. Both sexes blacken their skins with grease and foot.

The inhabitants of Nicobar daub their countenances with green and yellow paint, and dye the hair of their children with coarse vermilion.

The wandering Arabs, and some African women, paint the chin and lips with an indelible blue; adorning other parts of their bodies with fantastical figures, in the same colour.

The Moguls tear up their flesh into the shape of flowers, like the effect of cupping-glasses; and, being painted with the juice of roots, these ornaments make their persons resemble a piece of coloured manufacture.

The Tunquinese and Siamese blacken the teeth with a kind of varnish, pretending that their natural whiteness is unbecoming, since it puts man upon a par with other living creatures; and, in order to make this whimsical change durable, they submit to an abstinence of several days under that painful operation. But these savages, and the negroes on the coast of Guinea, have a still stranger custom, which is, to run the nostrils through with a peg about four inches long, and of a finger's breadth; so that its two ends, touching the cheek-bone, apparently diminish the size of the nose: they likewise wear still larger pins in their ears.

Every similar custom increases the natural deformity of people far removed from the standard of perfection, consistent with our ideas. Indeed, nature seems to have treated them as ill-favoured children of a cross step-mother. In point of taste, they furnish no models in their dress, caprice, ignorance, and habits of life; for, accustomed to see  
their

their own frightful selves, their eyes cannot be improved to the level of beauty; nor can they divest themselves of prejudices so deeply rooted, and early sucked in, as we may say, with the mother's milk.

If we visit the northern regions of Europe, Laplanders, Samoides, Bozandians, Greenlanders, Esquimaux, and others, will be found to differ only in shades of ugliness, having the face broad and flat, the nose smashed, eye-lids drawn out towards the temples, very large mouths, thick lips, high cheeks, thick and short heads, squeaking voice, small stature, squat and lean, and seldom above four to four and a half feet high.

Nor are the different inhabitants of Tartary handsomer than those just now described. The Calmoucks, particularly, may be called superlatively ugly; having their faces so flat and wide as to leave an intermediate space of five or six inches between their eyes, which are extremely small, and with a nose so flat as to exhibit only two cavities for nostrils. Their upper jaw is sunk inwards, and the lower one juts out in ghastly horror. They are equally remarkable for large and thick knees, turned outwards, with feet bent in an inward direction. Their usual miserable fare agrees with the roughest appearance.

Near Davis's Streights, the Laplanders and their neighbours are of a smaller size; a nut-brown complexion, with short and thick limbs.

The savages of Hudson's Bay, and on the coast of Labrador, have their faces and bodies almost entirely covered with hair; the countenance flat and wide, large eyes and flat noses.

Superior to all these, the inhabitants of New Holland improve their frightful ugliness, by drawing the two upper fore teeth. They have eye-lids half shut in, from the custom of using such a defence against the malignant bite of gnats.

Thick lips, broad and flat noses, bushy hair, black teeth, with distorted countenances, are the features which characterize the Papous and inhabitants of New Guinea. In our estimation, the fair sex there hardly deserves this appellation; with coarse looks large bellies, slight limbs, and monstrous breasts. Whim, not reason, seems to direct their motions and course of life. Like brutes, they are lazy, cruel, ignorant, and untractable; having no just notions of right and wrong, perfection and deformity. The same disorder that distinguishes their persons, is a leading feature of their moral character. In short, they are arrant thieves, who set no bounds to the indulgence of their most vicious appetites.

Among the dwarfs and nobility of Calicut, there is a species of men whose legs are as large as bodies of the common size; but some of them have only one over-grown limb. These thick-legged beings are common in the island of Ceylon, where they  
pride

pride themselves upon such excellence as does not diminish their strength and activity.

The Turks, Persians, Moguls, Chinese, and other eastern nations, would not have such strong claims to beauty and symmetry, were it not for a well-known circumstance, that, sharing our conceptions of what is most pleasing to the eye, the higher order among them betrays a concern for embellishing the human race, by constant marriages or connections with the finest females, dearly-bought Greeks, Georgians, Circassians, &c. &c. Thus the mass of population has been purified by partial emigrations, extended commerce, and consequent intercourse between the various classes of mankind.

ESSAY

## ESSAY III.

*On National Customs, Dresses, and Ornaments, which change, hurt, distort, or disfigure the Human Species.*

THE local distinctions pointed out must be familiar to an historical painter; and when we consider that the bones form a column that entwines the human structure, our minds will be fully impressed with the importance of anatomy as connected with painting and physiology.

Hence appears the necessity for a student to be conversant with the whole chirurgical system, as it respects the prevailing proportions in all parts of the globe.

Partial symmetry alone does not form beauty, for perfection consists of several just, united proportions.

For instance, when the muscles are ill matched, they cannot contribute to graceful motion. Something inexpressible is then missed, from a want of concert in moving the body; and this defect is perceived when the constitution becomes impaired by sloth, neglect, or bad habits.

In regard to dress, pomp, and ornaments, fashion has frequently proved injurious.—Children are differently

ferently spoiled : in some parts their noses are broke down, or stretched out on the sides, by heavy brass rings, while their ears are lengthened excessively by the like irritating operation. Nor are they less tortured in a sort of press, used for smoothing, polishing, or enlarging their heads, according to the caprices of parents.

Thus, in China, \* the principal charm lies in a small foot. Mothers there take particular care to stop the growth of that useful limb. This singularity is accounted for by eminent writers who have visited that eastern country.

We, however, need not travel so far to look for extraordinary or fantastic modes, nor even among the wildest tribes, since polished nations furnish sufficient examples of the abuse of taste and judgment

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\* It is supposed that the Chinese first placed an extraordinary value on small feet from motives of jealousy. Without thinking of bad consequences, mothers began betimes to bind, swaddle, and wrap up their daughters in such a manner as prevented them from stirring out of doors, or walking upright, without attendants. Hence proceeded that unnatural form, which was soon rendered so familiar, as to become, in their eyes, the standard of beauty. In the same way we find the Venetian ladies doomed to a closer retirement than what they would probably suffer, were it not for the inconvenience of large pattens. Such strange fashions are not easily left off; nor do French manners gain ground in any country so fast as those principles of liberty which have never been entirely eradicated from the human breast.

in wearing apparel introduced into the highest circles : for, is it not equally by binding, squeezing, or wringing their feet, that European ladies are elegantly shod, so that their supporters can scarce keep up the upper works of their pretty persons ?

Nor can the superstructure be solid, if the pillars on which it stands are seen to totter under the weight of fashionable superfluities.

Hence proceeds the affecting sight of so many tiny living figures, which otherwise might have been substantially formed, in courts and cities.— Even their gait, as well as their whole appearance, betrays evident marks of those restraints which they have suffered from the cradle, especially by the gilt and brilliant ferrets which they display. It is, nevertheless, true, that, without such embellishments, they might not captivate weak, effeminate men, like themselves ; but their personal attractions would be so much the more striking, were every natural perfection seen undemolished by art.

When we reflect coolly upon some of the usual distortions, it must be admitted, that a thinking stranger cannot see, without pitying, a charming girl who walks on tiptoe, and strives in vain to conceal how much she suffers in her nerves, fibres, and tendons, from the pressure of bands, calculated to preserve delicacy as preferable to health.

Consequently, in the state of pregnancy, such feeble creatures are unable to keep the balance for  
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taking exercise suited to their situation. The fatal effects of this pining sickness are sufficiently known to tender husbands and good fathers; yet it is acknowledged, that, in order to appear of the middling size, women would have no need of high heels, were not their growth interrupted, and their knees disjoined, by those abuses to which fashion has given a sanction, to the prejudice of beauty.

Equally pernicious to infants are too tight swaddling clothes, against the laws of Nature, at a moment when, coming out of a prison (the womb), they should feel no shackles ill suited to their tender age.

Nothing afterwards impairs the constitution so much as stays, or other trammels, which high examples have introduced among the middling classes of society. Nor need we seek farther to account for those affected airs, timid looks, and careless steps, which distinguish the *ton*, or polished manners, of the higher ranks; although, in fact, they proceed from sloth and indolence, acquired by such bad habits as destroy natural graces.

Will mankind, then, never agree in forming just conceptions of a beautiful figure?

The ancient Greeks differed materially from the moderns in their ideas on this important point.

Born under the finest canopy of heaven, the inhabitants of Greece formerly gave full scope to Nature, by using such slight dresses, and continual exercises,

cises, as promoted health, strength, and symmetry. Thus sculptors had their eyes familiarized with living models of excellence, in that state of simplicity, from which they designed inimitable statues.

But now-a-days we could not easily find in the higher order similar perfections, in the same degree as amidst that laborious class, which still contributes to embellish the human frame by rural employments, races, and diversions, used with moderation: but for these, the plagues of luxury and effeminacy would make the human race degenerate more visibly, or dwindle into shadows.

On the other hand, excessive labour would have a contrary effect upon both sexes, and prove fatal to the nicest shapes and fairest complexions; as every man may observe, that female peasants lose the fine tincture of a skin, with well-turned tender limbs, just as they gain additional vigour with robust and athletic shapes. But, in the populous towns of Europe, beauty, like a flower, requires our fostering care, to prevent it from perishing by a cruel blast before it be full blown.

ESSAY

## ESSAY IV.

*Discussion of the Question,—Whether Anatomical Knowledge might be acquired sufficiently without Dissection? Remarks on the Sports, Discipline, and surgical Principles of the ancient Greeks.*

WHILE a sufficient degree of anatomical knowledge tends to ascertain just proportions, it behoves a painter and physiognomist to be well acquainted with the muscles, as on them depend a variety of forms and postures. On this occasion it becomes a question deserving our serious consideration, Whether a course of such studies might be pursued equally well with or without mangled bodies, disgusting to refined feelings?

Instead of displaying openly the muscular mechanism upon a lifeless subject, might not the same useful purpose be answered, were we to set up, as objects of study, those excellent statues which are supposed to point out every distinction in a true light? Besides, we have perfect figures in wax, on which every shade of Nature's colours is duly preserved.—Or can we dispense with dissection, by substituting  
living

living subjects, whose attitudes, mien, and motions, might serve as imitable marks?

However plausible the objections to anatomy might appear, they would prove in Reason's eye to be frivolous pretences, suggested by lazy students, adopted by men of middling abilities, and despised by the most celebrated professors; for, upon reflection, it must be found, that, perfect as figures in brass, wax, or marble, may be in the likeness of an original, they do not discover the Supreme Designer's inward machinery, in a manner suited to all those violent evolutions and forced situations which a living model could not bear. Or, even were it otherwise, we could only judge of effects apparently, without tracing them to their real causes, as we can do upon bloodless bodies, with the inexpressible satisfaction attending every gradual discovery, which enables us to account for the slightest visible variation in such parts as become objects of contemplation or imitation.

It is after having studied in this manner, that a pupil ought to attain a proficiency in drawing, before he should be permitted to use those substitutes for skeletons, which Art has so numerously multiplied for his use; at the same time he would retain in his memory the principles of osteology, retraced by the sight of living creatures, whose gestures might be rendered a subject of daily observation, to  
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prove what he previously knew in theory and from demonstration.

With such a fund of information, the student would do well to improve himself by copying ancient statues, with hopes of imitating, in some measure, their beauties; for, by these fundamental accomplishments, he might clearly see the way before him in his profession, and be soon able not only to delineate justly all the muscular motions, but also to explain the cause and main springs of every gesture in a masterly manner.

It remains for us to refute another objection which might be started against the absolute necessity of anatomy, from a consideration, that without this science the Greeks produced master-pieces. But if historians do not dwell upon their skill in it, we are at liberty to entertain doubts about their ignorance in that respect; especially as it was impossible for them to succeed so well in every imitation of Nature, unless they had possessed secrets unknown to their posterity.

In the most remote times of antiquity, bodily exercise was so much the more common, as the united strength of individuals composed the power of a nation. The fate of an empire then depended on the issue of a single combat between one man and another; just as each could wield the first arms used in the field, before they had dared to imitate the thunder of heaven, or invent easier means of

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destruction

destruction. Under such circumstances, it was the policy of every inconsiderable state to train up and harden the race of men, in order to form an invincible barrier against the incroachments of a powerful neighbour.

Several wise institutions contributed to that salutary end in Greece, where every possible discipline was most perfect. Giants were reared to withstand the torrent of invasions from Persia. The Olympic Games were mere trials of skill and dexterity, preparatory to the famous battles of Marathon, Thermopylæ, and Salamine. The public festivals were recreations equally calculated to raise that generous spirit of emulation which is so necessary to animate contending armies, and make men devote themselves to conquer or die.

Thus it was that, by continual activity, a people weak in numbers became a strong rampart, capable of resisting the innumerable forces which poured in upon them from Asia: nor could the Greeks have maintained their independence with so much honour and glory, had it not been for that education and mode of living which promoted elastic agility and gigantic force in their civic tournaments and military exploits, where national pride and personal bravery were excited by the highest allurements.—Indeed, it is impossible for us to conceive an adequate idea of the Racer, the Charioteer, and the Wrestler, contending for victory in the high-day of blood.

Happy

Happy then was the painter or sculptor, who saw the best models of champions and warriors stripped of superfluous fineries, and presenting, in every anxious attitude, subjects of lectures on the human constitution.

Another opportunity to cultivate the fine arts was derived from a variety of laudable diversions, fitted to youth of both sexes, who, in the state of innocence, presented their natural graces, which excited the strongest emotions, without raising a blush at Lacedæmon.

If, therefore, some professional gentlemen would exclude anatomy from a just rank in the scale of sciences, it must be granted, that they might procure a compensation for the deficiency, were it in their power to establish such popular Assemblies or Museums as the Grecians had, for experiments on the system of Nature, which they must have studied with the greatest advantage, as they have transmitted to us the most striking proofs of their superior workmanship. Finally, we conclude that they could not have attained that degree of eminence without some anatomical principles, though perhaps differing from our refined systems.

## ESSAY V.

*On Grace and Beauty.*

THE impressions made by Beauty and by Virtue are alike: we acquire the same conscious sense of bodily perfection and moral rectitude in both cases, where our feelings act in concert with our judgment in forming an estimate of their relative value. Our just conception of true excellence is proved by the immediate delight that it affords in gladdening the heart, while, on the other hand, extraordinary deformity raises the involuntary smile of derision, when it is not restrained by pity, respect, or reflection.

Insanity, or other defects of the mind, do not shock us more than singular features;—too prominent a nose, ill-matched eyes, a figure like Don Quixote's, crooked limbs, and projecting shoulders: such a sight creates either compassion, flight, or indifference.

The beauties of the soul and body bear likewise a resemblance in their changes, being affected by the same causes.

Violent passions, anger, jealousy, hatred, envy, convulse the body, and disturb the mind; disfiguring  
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ing the countenance, and at the same time injuring the health.

Plato considered in the first rank of Nature's blessings, a superior understanding; and, in his estimation, beauty had the second place; for he preferred it to all the gifts of fortune, birth, and power. —“ If,” says he, “ Youth and Beauty had Prudence on their side, they would be still greater objects of adoration.”

The Greeks erected temples to *Venus*, whom they worshipped under different names.

In their language there is but one word, *Cosmos*, to signify the World, Beauty, and Symmetry. It is to their high idea of perfection that we must attribute the superiority of every work that is come to us from their hands; no less visible in their poetry, than in the monuments of arts which have escaped the ravages of time, wars, and revolutions.

The inference to be drawn from these reflections is this,—that the best moral writers, the most celebrated poets, and the most perfect architects, were cotemporary with those sculptors and painters, who likewise stood the foremost in repute in their professions. Thus Homer, Pythagoras, Socrates, Plato, Eschylus, Demosthenes, Sophocles, and Euripides, were the friends and rivals in fame of Phidias, Apollodorus, Agathias, Agesander, Parrhasius, Protogenes, Zeuxis, and Apelles. In order to render wisdom amiable, that ingenious people deified this

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attribute as peculiar to Minerva, the daughter of Jupiter, one of the most beautiful and powerful Goddeffes, who partly owed her influence to personal charms.

Indeed, without studying the animal fyftem, all attempts to make a confiderable progreff in the fine arts would prove ineffectual, for the fuperior excellence of a figure or ftatue lies in the perfeft union of grace and beauty. Such perfeftion may be faid to confift of the moft regular human forms, relative to the refpeftive motions of all parts; and, in addition to this ftriking fymmetry, the graces which fet it off are better felt than defcribed by every man of tafte who is impreffed with fomething inexpressible, arifing from a clofe connection between the movements of the body, and thofe agitations of the mind which he cannot fuppreff, while he views the moft exact proportion of every part completely united in the harmony of a whole pleafing object of love or admiration.

ESSAY

## ESSAY VI.

*Upon Expression, or Character, in Painting, &c*

REGULAR proportions, symmetry, and elegance, are not the only requisites to form a perfect figure.

Without a just leading feature, that characterizes the subject represented on stone or canvas, neither the finest colours of a painting, nor the perfect harmony of a statue, will meet with the approbation of real judges.

Expression, then, is the soul of both; the lively and striking image of animated affections, that breaks out, betraying every inward emotion, in strong characters, stamped upon the countenance, and communicated by that swell and relaxation of the muscles by which the secrets of the heart transpire, more or less, according to the lineaments and degree of constitutional vigour.

Even the reviewers of paintings should be forced to share the impressions so represented in a masterpiece, after a magical invention that few professors communicate cheerfully to their pupils.

It is, therefore, indispensable for the artist to study man in a moral point of view; to sift into the inmost

recesses of his breast, in order to see the passions, and give life to his representation, without missing a single shade that characterizes the original, just as much as he is distinguished by the features of his face.

His progress in this branch of the imitative arts will be favoured by a fruitful imagination, skill in drawing, with a just distribution and force of colouring. Thus he will obtain the lively spark that Prometheus stole from Heaven, to animate brittle clay, the boasted work of his hands. It is, then, by the particular excellence of affecting and speaking figures, that Painting holds a rank among the sciences as the Sister of Music and Poetry.

ESSAY

## ESSAY VII.

### *On the Passions.*

#### SECTION I.

LET us cast a glance at the origin and division of the Passions, before we consider their different outward signs.

No study would be more interesting to man than to analyse himself in a moral sense, were it possible for him to do so. The most enlightened philosophers have differed upon this point: some of them maintain the prevailing opinion, that this thinking creature is born good, without those fatal passions of which he becomes the sport, as they originate entirely from education, example, and circumstances. According to this system, he brings with him into the world the precious seeds of virtue and justice, which are destroyed in the bud by bad habits and difficulties of life; so that vice grows up in their place.

Besides other advocates, the celebrated Rousseau employed his persuasive language in defence of these principles. Opposite sentiments, less flattering to human nature, have been supported with equal zeal, but more spleen than good sense, tending

ing to propagate the shocking idea,—that all men are born wicked and cruel ; so that force alone being the rule of power which made the first law, they partake equally of a longing desire to possess the same objects, and consequently are in a state of warfare from their infancy to the grave.

Hence arises the perpetual contest that spreads such havock and desolation upon the earth.

Another modern philosopher, Helvetius, after having confuted these doctrines with solid arguments, has endeavoured to hit the right medium between two different systems, without indulging the spirit of contradiction. He maintains, that a child comes upon the stage of life neither good nor bad, but becomes either according to events. From the moment when he breaks out of his mother's womb he opens the gates of creation, and enters without those ideas and passions, the mere effects, or impressions, of his existence.

Agreeably to this way of arguing, self-love, the strongest leading principle, considered as innate, is only a main-spring of action, acquired from experience and recollection of pain or pleasure, from the earliest period, added to the fruits of reflection at a riper age, when we come to contemplate and weigh the whole order of things in the scale of Reason.

## SECTION

## SECTION II.

*On the Division of the Passions.*

PHILOSOPHERS have displayed no less ingenuity in arranging the order of the Passions, than in tracing their causes, by dividing the whole into two classes, the simple and the composite.

In the first class they reckon Admiration, Love, Hatred, Grief, &c. ; in the second, Reverential Awe, Fear, Courage, Hope, Despair, Longing, Rage, &c.

Such is the arrangement approved of by the celebrated Le Brun ; but, with all due respect for the memory of so eminent an artist, we are inclined to contradict it, as founded, in some instances, on fancy or conjecture : for why is hatred more simple than rage ; or how does hope or despair appear to be more a compound than joy or sorrow ?

Dandré Bardon makes four divisions of Quiet, Agreeable, Painful, Terrible, or violent passions ; which strikes us as a more just and natural way of drawing the line of distinction. On this occasion a doubt might be suggested respecting the propriety of adding to that list some of the other gales which ruffle the human mind,—such as Suspense, Timidity, Contempt, and Derision.

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It was probably the difficulty of ascertaining these various agitations, that induced Watelet to adopt another method, in the judicious observations following his Poem on the Art of Painting.

He divides the Passions into six different branches, of which each has several distinguishing shades. For instance, Melancholy is the consequence either of misfortunes or of compassion; but it has various gradations by which it is particularly marked and pointed out to discerning eyes. Every shade of difference bears something peculiar to it, such as—

Anxiety, uneasiness, regret;  
Vexation, peevishness, languor;  
Dejection, resignation, oppression, &c.

Joy, the second principal passion, has several degrees:—

Satisfaction, smiles, and laughter, occasioned by mirth;  
With demonstrations in gestures, singing, and dancing;  
Convulsive fits of laughing;  
High glee, tears, embraces;  
Mad pranks and raptures, resembling the state of intoxication.

Grief, produced by bodily pain, has also its proportioned variations, according to the degree of

Sensibility, pricking, griping;  
Torments, pangs of death, and despair.

Sloth,



Sloth, or indolence of body and mind, produces the following situations:—

Suspense, or irresolution, timidity;  
Oppression of the spirits, distrust, or apprehensions;  
Fear, flight, fright, terror;—and,  
Ghaftliness.

Impressions of an opposite nature proceed from—

Strength, courage, steadiness, resolution;  
Assurance, intrepidity, and audacity.

The Loss of any thing dear to us, Contradiction, or Disappointment, generally excite envy, jealousy, and aversion, in the following gradations, viz.—

Indifference about a person that has given offence;  
Dislike, irritation;  
Threats, disdain, contempt, raillery;  
Antipathy, spite, insult;  
Anger, rage, vengeance, and fury.

Such is the division of Passions arranged by that eminent writer, according to their natural order, and in such a manner as to form a scale of the different emotions to which our minds are subject.

But in what class must we place the passion—by turns soft and violent—Love, whose temptations are so pleasing, and whose transports are so fatal? The same intelligent Poet says, that this affection should be represented, by mingling the traits of timidity, embarrassment, agitation, languor, admiration,

ration, longing desire; a panting breast, with eyes alternately sparkling, and rolling in tears; the fairest incarnation, blooming features, expressing impatience, with a flutter like the quaking fit of an ague, followed by sighs, anxiety, and raptures.

Our next delightful task is to consider the characters in which all these sensations are stamped upon the countenance, so that every motion of the soul transpires by the action of the nerves, fibres, and muscles; which it would be impossible for an artist to represent properly, unless he was well acquainted with the interior machinery of the human figure, hereafter explained. This demonstration must carry conviction with respect to the advantages that the fine imitative arts derive from anatomy.

**ESSAY**

## ESSAY VIII.

*On Man.*

OF all living creatures, Man is the most perfectly framed by Nature in every respect.

He comes into the world straight, without defensive arms, spotted with little hair or down, and gradually grows to five or six feet in height.

His head is nearly of an oval form, with the crown flattish, or tapering, and covered with long locks. The fore part is of the same shape, and the hind part circular.

His face is bare; his forehead is almost even, square, levelled at the temple, and interlined with the hair in two right angles.

His eye-brows are prominent, nicely seamed in towards the temples, and separated by an intermediate blank space.

His upper eye-lid is in motion, and the under one fixed, each having lashes rather crooked and jutting out.

The eyes are round, and kept in their socket, without being fastened by a particular muscle. The eye-ball is round, without a twinkling membrane to preserve it.

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The cheeks are equally convex or roundish, soft and fresh-coloured; the jaws sloping, and looser above than below.

A rising nose, shorter than the lips, higher and rounder at the bottom; oval nostrils, hairy within, and thick edges, form an essential part of the leading features.

The upper lip is almost perpendicular, with a hollow, the lower one almost straight as a line, or curving gradually; the chin picked, plump, and roundish.

The male sex has the mouth bearded, with long flowing hair, particularly at the chin.

The teeth are grafted on the jaw; the fore-teeth run close in a row, more equal, even and rounder, than in other animals: the eye-teeth are placed afunder, longer than the others, shorter than those of brutes, and on a level with five grinders on each side, flattish, but not with such deep-rooted prongs as in the brute creation.

Bare, round, and lateral ears encircle the head like a half-moon, with the upper brim hollow, and soft at bottom.

The bust consists of the head, neck, breast, back, and belly. The trunk is headless, formed by those other parts.

The neck is almost round, with the nape lightly turning; the throat hollow at top, and convex in  
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the middle. The chine-bones are not joined by any ligament.

The breast is, in some degree, smoothed, particularly the upper part ; the wind-pipe hollowed, ribs curving, and hairy ; pit of the stomach smoothish, two paps at the breasts, like globes, with nipples of a cylindrical form, flattish, wrinkled, and enclosed in a circle.

The bottom of the back is almost even ; and between the shoulders there is a flat space.

The belly is hollow and loose, with an open navel ; the epigastrium is even, the hypogastrium globular ; the ribs even and hollow, the waist hairy, the tunnel of the body is wide at top, and narrower below. The difference of sexes is consistent with their respective characters for assurance and modesty.

The arms are thick, round, and as long as the legs. The elbow is flat, but a little picked.

The palm of the hand is hollow within, while the fist rises and spreads itself like a globe ; with five fingers, and a thumb separated from them, shorter and broader. The second, third, fourth, and fifth fingers are close to each other ; the fifth is the least ; the second, fourth, and particularly the third, or middle finger, being a little longer, and reaching down to the middle of the thighs. The nails are almost of an oval  
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shape, and with a smooth surface, surmounted by a whitish crescent.

The legs and limbs run up straight, as strong supporters of the human frame.

The thick parts of the thighs are round and plump. The knees are turned within-side, and very flat, with the joints or pans hollow below. The legs are of the same length as the thighs, more slender at the shins, thin at the fore part, with thick muscular calves, plumper behind than forward.

The heels are oblong, broader than in other animals, jutting out with hard angles on each side, of a semicircular form. The soles of the feet are likewise oblong, round in the fore-part, even behind, and hollow crosswise, with a close row of five curved toes, roundish below; the first, largest and shortest; the second and third almost alike; the fourth and fifth diminishing regularly; and nails as on the fingers.

Man differs from brutes in his upright and smooth body, with a covered head, eye-brows, lashes, and some hair on other parts at the age of puberty. He is likewise distinguished by his breasts, a larger brain than any other creature; his palate and trachean artery; his face even with other parts; the nose prominent, his chin picked, and legs supported by heels. Nor does he feel himself less favoured  
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in whatever tends to the comfort of a married life, and the population of the world, being the only living creature that has received the greatest gift of heaven—the power of speech, the means of communicating his ideas, and providing for his wants in a civilized state.

## ESSAY IX.

*On the Varieties of the Human Species.*

THERE are not two kinds, but several distinct families of mankind. Kant reckons four human races; the Northern European, the American, the Negro, and the Tawny Indian who inhabits the banks of the Ganges.

Erxleben admits six different species of men;—the Northern Dwarfs, or Laplanders; the Asiatic Tartars, living from Mount Imaus to the borders of Lapland; other inhabitants of Asia, beyond the Ganges; Europeans, Africans, and Mexicans.

The Northern Dwarf, or Laplander, is of a diminutive stature, and his leading features correspond with his brutal state and habits of life.

His visage is flat, broad above, contracted, and lengthened in the lower part, with a flat nose pressed down; small eyes, with a semicircle of yellow brown and blackish colour about the sight. His eye-lids are lengthened toward the temples, the cheeks excessively high, the mouth very large, thick lips, a shrill squeaking voice, a monstrous head, sleek and black hair, tawny complexion, his body thick, short, and squat, for he is seldom above four feet high.

The

The Tartar is well set, with thick thighs and short legs: his countenance is flat, and five or six inches broad from ear to ear; his eyes are very small, and his nose is such a snout as exhibits two holes instead of nostrils: his knees are turned outwards, and his feet inwards.

The Asiatic is of a yellowish complexion, with black hair, and dark eyes: he is of a melancholy turn.

The European is fair, fresh-coloured, with light, long, and curly hair, and generally blue eyes.

The African is black and heavy; his fibres are loose, his skin soft as velvet, his hair black and crispy, the nose flat, with thick lips; and the female that becomes a mother has a very long breast.

The Mexican has a broad countenance, a very small forehead, covered with hair up to the eyebrows, and small black eyes.

*Camper* has published observations upon the skulls and faces of different nations, by which it appears that the lines of the countenance run more awry in Blackamoors than in Europeans.

*Blumenbac's* Treatise on the same subject likewise contains curious remarks.

Much has been said about Wild Men, found at different times in the forests of Europe; but they were almost all born deaf and dumb; abandoned

by their parents on that account, or artful impostors.

A real Savage, as Buffon says, would be an object of curiosity to a philosophic eye able to trace all the instincts of pure Nature, observe the human mind without disguise, and form a just estimate of the strongest innate cravings implanted in his breast, where we should probably find more peace and comfort, with a larger portion of virtue, than by searching the bosom of a civilized man; consequently the result would be, that vice proceeds from evil communication in society.

*Bernard Connor*, in his *Evangelium Medici*, has given us the history of a child bred with wolves. *Martiniere*, in his Geographical Dictionary, mentions a wild youth found in the forest of *Hanover*.

But in order to form a just idea of our natural powers, undirected by the light derived from a polished education, let it suffice for us to state some of the particulars that the younger *Racine* has transmitted concerning a Savage Girl, who was discovered near *Chalons*, in the year 1731.

It was at the Castle of *Sogny*, that some servants, having perceived at night what was taken for a spectre upon an apple-tree, they drew near quietly, with an intention of surrounding it; but the object of their attention suddenly jumped over the walls of the garden, and escaped into an adjoining grove,

grove, where she perched upon the trees, rambling from one to another.

The Lord of the Manor in vain employed his vassals in the chase of that poor female. At last, his lady hit upon an expedient that was attended with success:—a pail of water and an eel were the baits used to tempt the Savage Girl to come down, as she did, to satisfy the strongest calls of hunger and thirst, like the wild brute.

Accordingly, being easily taken, she was well treated ; nor did her palate require the refinements of modern cookery.

The nails of her fingers and toes were found to have grown to the length of such claws, as enabled her to climb with ease in the woods.

At first, she appeared black; but the change in her way of life soon restored her fair complexion.

Knowing no language, she could not pronounce any other but frightful cries, or the imitations of those birds and beasts with whom she had been conversant.

Afterwards, having learnt to speak, she gave an account of her former habits and adventures.

The cold weather had compelled her to wear the skin of some animal indispensably; but, in every season of the year, she used a girdle, to which she fastened a kind of round and short club, for

E 4
killing

killing wolves and other creatures. When, with this weapon, she had killed a hare with one stroke, her custom was to flay, and devour her prey ; or, after over-running this swift game, she used to open the veins with her nails, drink up the blood, and throw away the rest.

Her quickest pace was a sort of flight, performed by sliding along imperceptibly, in such a manner, that her body and feet hardly seemed to move.

She possessed no less address and agility upon another element,—the water, where she dived with all imaginable ease, and chose her favourite food.

Neither her age nor her native country was ever ascertained. Being interrogated upon one of these points, by signs, she pointed at a tree, without doubt because she had lived in forests, and never seen any other dwelling.

With a view of discovering the place of her birth, *La Condamine* shewed to her the roots of several *American* plants, in hopes that she would recognize what she might have seen in her infancy ; but this experiment proved useless.

She related with sensibility, the loss of her companion, of the same age and sex.

While both were swimming in the river (the *Marne*, as we suppose), they heard a report, that  
forced

forced them to plunge ; for a sportsman had fired upon them, instead of shooting water-fowls. Upon finishing their fishing party, they strolled a good way further ; and at the entrance of a wood, they found a pair of beads, which produced a quarrel, as both wanted to make a bracelet.

In the contest for this bauble, she was provoked, by a stroke upon her arm, to return it with such a violent blow upon the head of her antagonist, as made it bleed. Then, instantly, from a motion that natural instinct suggested, she climbed upon an oak, and found a gum for the cure of such a wound, according to her innate knowledge ; but, returning to the spot where they had separated, she missed, and lost for ever, the partner of her cares.\*

\* As Grecian Statues require a veil suited to British modesty, so a few of Mr. Sue's ideas may be rather improper without a slight gauze, whether the attempt be made in prose or poetry to convey descriptions.

The present manners, on both sides, require equal delicacy. Thus, in case any fair readers, mothers, or midwives, should take up these Essays, let us pay a compliment to their sex, as a compensation offered for having suppressed any such part, as was originally designed for professional characters.

### ON MODEST KISSES.

Is Frederick's glory worth a moment's bliss ;  
Or Newland's treasure equal to a—kiss ?

No ;

No ; let us die before our pleasures cloy ;  
While we look up to heaven for purer joy  
Than what proceeds from moving scenes of life,  
And living pictures of a tender wife.  
At last, since Angels, pure in mind, embrace,  
Let lovers bask with modesty and grace !  
May Beauty's smiles reward the wise and brave,  
Till female lips with theirs shall share one grave.

ESSAY

## ESSAY X.

*On the Differences of Stature.*

ACCORDING to Buffon's estimate, the middle size does not exceed five feet four inches, French measure; and he considers men as tall, from that height to five feet nine.

Women are generally shorter by two or three inches; and they attain their full growth so much the sooner.

*Haller* makes five feet five to six inches the standard for the human figure in temperate climates, where the constitution is not impaired by a too sedentary life, or a bad habit of body.

He likewise observes, that in *Switzerland*, the inhabitants of vallies are taller than mountaineers. Some of the former are above six feet high. Are they to be considered as giants; or where is the line to be drawn for so calling them and others of equal stature?

A Finlander was exhibited as such at *Paris* in the year 1735. He was above six feet eight inches.

A Life-guard in the duke of *Brunswick's* service, and *Macreath* who was shewn in *London* in 1760, were both above seven feet high.

A Swe-

A Swedish peasant, *Caianus*; a Finlander, *Gilly*, of *Trente*; and the king of *Prussia's* life-guard, measured more than eight feet.

*Goliath* must have been nine feet four inches in height, if we calculate it right from holy scripture.

Notwithstanding such authentic accounts as have been published about the *Patagonians*, and much as they may comparatively overlook other people, we cannot suppress our doubts respecting their middling height; nor ought it to be deemed gigantic in every individual; for if, as in other countries, a few of them have exceeded their national standard, as we may call it, of six to thirteen feet, others might have been seen proportionably lower, or about that smallest size, on a general run.

Other suppositions have been formed upon the appearance of extraordinary bones dug up; which were either the sad remains of brutes, or puffed up by disease, if they had really formed a part of a human skeleton.

There is, in the Museum of Natural History at Paris, a broken bone, 2 ft.  $4\frac{1}{2}$  in. long, which had been considered as having been part of a giant's body, until *Daubenton* proved it to have belonged to another animal.

The *Roman History* mentions a famous giant *Teutobachus*, whose bones were said to have been discovered near *Langon*, in the beginning of last century: they were exhibited as such in France, Flanders,

Flanders, and England. A celebrated surgeon, *Habicot*, supported that opinion, which was opposed by *Dr. Riolan*, and is since exploded by *Dar-benton* and other eminent men.

On one side of the question it was asserted, that, upon opening the giant's tomb, a human skeleton was found, twenty-five feet and a half high, ten feet broad at the shoulders, and five feet round, with a head five feet long, and ten feet in circumference.

The objections to such assertions are obvious to a professional character.

A skeleton five feet high, is only thirteen inches broad, and seven and a half inches round. Consequently another of five-and-twenty feet would measure only about three feet at the ribs, and five feet three inches at the shoulder-blade; where ten feet would be the just proportion to the immense height of fifty feet, in such a living creature as we should imagine to have existed. Upon that scale, five feet in compass would be proportioned to thirty-eight feet in height.

The human skull is generally eight inches long, and one foot seven or eight inches round. A head five feet long, and ten feet round, could have suited only an animal thirty-five feet high.

The other parts were equally ill-matched to justify such a false idea as had been too lightly conceived.

The

palace of *Stanislaus*, king of *Poland*, at *Luneville*, where he had spent the greatest part of his life.

This dwarf was born at *Plaisne*, of hard-working well-set parents, who said that he came into the world scarcely weighing a pound and a quarter. He was christened on a plate, and had a wooden-shoe for his cradle. A goat was his wet-nurse; because, although his mouth was in just proportion to the rest of his body, it was too small to grasp his mother's breast. He had compleated his second year before he could walk in shoes an inch and a half long. He was about fifteen inches high at six years of age; weighed thirteen pounds, seemed hearty, well made, and comely; but his understanding did not pass the bounds of instinct.

At fifteen, his height was two feet five inches. While he grew afterwards, during four years, according as he approached manhood, by the strong efforts of Nature to compleat him for the purpose of fulfilling the first commandment, his faculties were over-strained. Hence proceeded a gradual decay—the symptoms of old age appeared—the back-bone gave way—his head bowed down—the feet grew weaker—his shoulder-blade jutted out—and his nose lengthened considerably.

Thus poor *Bébé* sickened, lost his spirits, and expired in his twenty-third year.

In 1751 there was another dwarf, at *Bristol*, fifteen years old, two feet and a half high, bearing the

the marks of old age, and weighing only thirteen pounds, having fallen away six pounds since his seventh year.

At the same time the *Norfolk Dwarf* made his public appearance, two feet five inches high, and twenty-seven pounds and a half in weight; while at *Amsterdam* a *Friselander* was shewn of the same size twenty-six years old.

A *Polish* gentleman, two feet four inches high, appeared at *Paris* in 1760; two and twenty years old; lively, well shaped, and conversant with several languages: he had an elder brother two feet ten inches high.

*Cardan* and *Muralt* mention another of two feet. The smallest kind seen was of 21, 18, and even 16 inches. But these diminutive creatures, dispersed in different countries, do not form a peculiar race of men, but untimely and degenerated productions of the human species.

On the other hand, and in the opposite extreme, giants have over-leaped the limits of common growth, from extraordinary powers or caprices of nature.

*Laplanders* are the shortest known nation; of four to four feet and a half.

The *Patagonians* are the tallest, since they stand at six to thirteen feet, according to the voyages of discoverers; but, as we have already said, these matters require further elucidations.

## SECTION III.

*On the Difference of Complexion.*

THE colour of different people varies from white to black. Between these two opposite colours there are many shades, containing a mixture of livid, or blueish, red, and yellow. These varieties are reduced to four principal tinctures, white, yellowish, tawny, and black.

*White People.*

THE *Swedes*, *Danes*, and other northern *Europeans*, are white, except the *Laplanders*, the *Samoyedes*, and the inhabitants of *Petzora*, a province divided by a river of the same name running from south to north.

This complexion distinguishes the *English*, *French*, *Germans*, *Poles*, and others living down to the 42d degree of northern latitude. According as we advance in southern climates, the tawny tint gradually increases.

The *Greeks*, *Neapolitans*, *Corficans*, *Sardinians*, and *Spaniards*, or those who inhabit the south of *Spain*, are consequently more tawny than their neighbours.

*Aha*

*Asia* is the part of the world that contains the greatest number of whites, in proportion to its population.

From the 65th degree of northern latitude, among the *Tartars*, we find the *Kabarandiskis* with fresh and reddish complexions. The *Circassians*, who live on the coast of the *Caspian* Sea, the *Persians*, *Natolians*, *Armenians*, *Georgians*, *Mingrelians*, and the inhabitants of the northern provinces of the *Grand Mogul*, are generally fair; and so are the *Chinese*, in the inland parts of their extensive empire.

The same colour prevails in the *Asiatic* islands; particularly *Ceylon*, where we may find the fairest race of savages.

There is likewise a vein of the same blood to be perceived among the *Papous* in *New Guinea*; but in *Africa* it is most visible in the mountainous parts of *Barbary*, in the kingdom of *Morocco*, towards *Mount Atlas*, and along the *Mediterranean* coast, as well as in other inland countries; for, according to *Bruce's* account, the blacks are most abundant in such provinces as border upon the Ocean.

As in *America* there is a kind of white *Laplanders*, so in *Lapland* we find a mixture of white *Finlanders*.\*

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\* By the settlement of Europeans in America, and the mixture of all colours in the Creoles and their descendants, the former prevailing

We must take particular notice of a cream-coloured and inconsiderable set of people mingled with the original natives of the Isthmus of *Panama*. But we have not been able to ascertain whether they form a peculiar race to be distinguished from all others, or are descended from yellowish ancestors, like the other *Americans*; or whether the complexion of the living generation be the effect of a casual temporary circumstance, or caprice of Nature, rather than the repeated proof of primitive and permanent cause.

*Yellowish People.*

WE unite under one head two shades of colour, a mixture of yellowish with a reddish likeness of copper; and the other is a lighter yellow, bordering more upon brass. These two colours are always more or less mingled with the dark tawny, or swarthy tincture of the skin.

The red copper-colour is the most predominant in the greatest part of America, even among the Indians who inhabit the southern provinces of that

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ing complexion has insensibly changed; but what we have chiefly in view, and the most interesting point, is, to ascertain the various shades of difference incident to the natives of several countries, according as this gradation is effected comparatively by the change of climates.

continent;

continent; such as the natives of *Guiana*, and others, who live on the banks of the river of the *Amazons*.

The *Brazilians* are darker.

The Isthmus of *Panama*, and the coast of *Peru*, contain the shade that is formed between red, copper, and yellow; for there the orange tint breaks out, while, the yellow has a cast of red, or is equally mingled.

Between the Gulph of *Mexico* and the eastern coast of *Africa*, towards the mouth of the river *Senegal*, are the Islands of *Cape-verd*, where we find savages called copper-coloured negroes, that are of the same complexion as prevails in *Bengal*, and in other parts of *Afa*. The Islanders of *Nicobar* are tawny and yellowish. In the *Philippine* islands there is an olive cast visible; and that yellow tint whitens or darkens gradually, according as the *Afratics* are more or less exposed to the burning heat of the sun.

### *Swarthy People.*

THE nut-brown colour is seen in all, even the coldest, countries; for it follows the greatest part of those shades which are distinguished between fresh and ruddy complexions in temperate climates, and that black hue which prevails in warmer regions.

As the two extremes touch, we need not be surprized to hear of exceptions from the general rule formed by the degree of latitude.

We call olive and dark, those tints of a swarthy complexion, of which the first borders on livid deep green, and the second is blackish like smoke.

It is, however, difficult to find language to express properly those various nice distinctions, which even art can retrace but imperfectly to discerning eyes.

If we begin at the frozen points of *Europe*, the *Greenlanders* will be found swarthy, or dark,

Like them are their *American* neighbours, the *Eskimaux*, and other savages, from *Canada* to the *Mississippi*; and even the *Mexicans*, with slight shades of difference.

In the *West-Indies* the olive complexion marks the few surviving original inhabitants, the *Caribbees*, who resemble those of *Paraguay*, and others along the great Southern Ocean, up the straits of *Magellan*.

But Captain *Cook* describes the people of the *Terra del Fogo* with faces like the rust of iron mixed with oil.

The *Laplanders*, the *Samoyedes*, and the *Crim-Tartars*, are the only swarthy or tawny *Europeans*.

Like them are the Asiatic *Samoyedes*, the *Ostiacks*, and the *Tongos*. The inhabitants of *Grand Tartary* are dark, or of an olive-colour.

In

In the southern provinces of *China* the shade of olive deepens, or grows darker; particularly in *Japan*.

The subjects of the Grand *Mogul* are generally of the same dark complexion, although the Emperor's title signifies white. In *Cambaye* they are grayish, like cinders. On the coast of *Coromandel* a more tawny cast appears; and on the *Malabar* coast a greater mixture of black is observed.

The *Persians* in the northern provinces are pretty fair; but their complexions darken to the southward in the highest degree.

To the southward of *Japan* there is a cluster of islands, likewise inhabited by darkish people; but in *Java* and the *Moluccas* they resemble a colony settled in those parts, called *Malays*, who are of a blackish red, or purple colour.

In the island of *Formosa* that darkish tint borders on black.

In the isle of *Ceylon* the blackish shade is not so deep as on the coast of *Malabar*. In the *Maldivas* the olive cast is predominant, blackening to the southward.

Mixtures of all these colours characterize *Otaheite*, and the other new-discovered countries, where the immortal *Cook*, *La Perouse*, and other mariners of two rival nations, displayed their intrepid spirit.

That tawny appearance forms a dark and deeper tint along the *Red Sea* and the eastern shores of *Africa*, among the *Egyptians*, *Ethiopians*, or rather *Abyssinians*; who have been misrepresented as black, because their country was formerly described as *Nubia*. Such is the distinguishing tincture of the skin from the plains and coast of *Barbary* to *Senegal*; nay, as far as the country inhabited by the *Foulese*, whose skins betray the changing shade from deep brown, or dark, to the jetty looks of blackamoors,—who appear in the back-ground of a picture of the human race; where the contrast of colours is not less astonishing than the infinite variety of mingled shades.

### *Blackamoors.*

BLACK is the prevailing colour in the centre of Africa, with gradual shades of difference. This jet is darkest in *Nigritia*, *Guinea*, and *Congo*, from the southern bank of the *Senegal* to the river *Gambia*, as well as in some cities situated more to the northward, and in the kingdom of *Tunis*. But in *Guaden*, or *Hoden*, to the southward of the desert of *Zanbaga*, the black is not so deeply stamped on the countenance as the dark or swarthy complexion.

The negroes of the islands of *Cape-verd* and *Gorée* are of that polished shining black, which may be compared to japan-ware, or fine ivory, or ebony.

From

From the habit of seeing and admiring their persons, they are flattered in the highest degree with the idea of being most favoured by Nature with that tincture of the skin which *Europeans* consider as frightful and gloomy. Thus familiarized with his beauty, the blackamoor makes a laughing-stock of such of his neighbours as are deficient in that personal jetty charm which forms his pride. This defect is visible in *Congo*, *Sierra Leone*, and on the coast of *Malaguatta*.

This race of men extends as far as Cape Negro. Their jetty black gives way to the sooty and swarthy air among the *Hottentots*, in *Caffraria*, *Monomotapa*, *Sofala*, *Mozambique*, *Melinda*, *Madagascar*, and the neighbouring isles.

There are, likewise, Asiatic blacks mixed with the inhabitants of countries already mentioned; particularly in the *Philippine* islands, the peninsula of *Malacca*, the isles of *Sumatra* and *Sombreo*, as well as in *New Guinea* and *New Holland*.

After all these observations, several systems have been set up, in order to account for, and explain, the causes of such a skin-deep colour as distinguishes so considerable a part of the creation. But, since some of the opinions started appear absurd, a few reflections on this subject may prove acceptable.

The slimy moisture in the pores is the principal substance that contains the tincture of the skin in all living creatures, from man to the vegetable.

This

This matter is white and transparent in *Europeans*, dark in *Mulattoes*, and black in *Negroes*; and, in them all, visible on the surface of their skins. If, by a surgical operation, that kind of slime be taken out of a Negro's skin, the outside will appear greyish from the wound.

Wherever this *mucus* or fluid is pressed down, it is least blackish; as we may observe by the palm of a Negro's hand.

The same observation is applicable to people attacked with the yellow jaundice, as will appear from the result of an experiment upon two men dead of that disorder, whose outward skin resumed its former whiteness, after having been washed to let out the mucous body, that melted in water; because this die is, with respect to the skin, as substances represented by a looking-glass, since it throws out a greater or lesser reflection according to its shades of light.

But if, when dissolved, it be permitted to settle, it will become black and solid again,—as we have observed in the course of our experiments; having collected a certain quantity of that matter by means of an ivory blade; yet, being less fluid in whites, it is not so easily found as it is in some vegetables.

Such is the paint that Nature uses to beautify all her works—the shells of fish, the feathers of birds,  
and

and the hides of brutes. It is likewise in our power to introduce an artificial colour that the skin will imbibe, from injections into the seat of the natural teint described.

ESSAY

## ESSAY XI.

*On Man: containing the Principles adopted for  
Studying Physiognomy.*

THE foregoing description of the human figure leads to the study of its several parts.

1st. The Head ; 2d, the Trunk ; and 3d, the Limbs, &c.

1st. Man's Head is the most noble and essential part, as the center of his intellectual faculties. His countenance alone would be expressive, together with the fair proportions of his skull, even were other parts of his body to be defective or disfigured.

A head that strikes us at once as fitted to the whole person, neither too large nor too small, generally bespeaks a greater degree of sound understanding than we have reason to expect from a thick, heavy, and clumsy block. A diminutive size is the sign of weakness. It should be neither too much turned round-about, nor lengthened to an extreme.—Symmetry forms perfection ; and we may consider as just models, those heads whose length, from the occiput to the tip of the nose, is equal to their horizontal breadth.

The face is divided into three parts.

The

The first is from the forehead to the eye-brows, the second is downwards to the nostrils, and the third reaches to the peak of the chin.

The more these divisions are marked on the countenance, so that their symmetry is striking, the greater ground appears to expect strong intellects, with a regular disposition or turn of mind.

An eccentric genius is seldom stamped with the lines that distinguish those three divisions; but their equality will be found, more or less, upon all faces, when they are measured with a softer implement than a rule.

The following principles must be adopted in studying the Physiognomy.

1st. The visage should be compared with the whole body.

2d. The student is to observe whether it is oval, round, or square, or of a mixed form.

3d. He must examine it in a perpendicular point of view, according to the three divisions adopted.

4th. He must consider attentively the character and expression of leading features, seen at some distance.

5th. He is to attend to the symmetry and harmony of the whole countenance.

6th. He is to observe the design, peculiarity, and shades of particular *traits*.

7th.

7th. He should pay the same attention to the three quarters of the outlines upon a sketch thus separately considered.

8th. Nor ought he to be less attentive in reviewing and comparing every such part as changes its appearance in a profile taken from a side view.

Besides, if you look at the face length-ways, and then turn it about, so as only to see the exterior outline of the bones, jutting out at the cheeks and eyes, you will be able to read through a man's soul, and discover his real character according to the rules of Physiognomy.

Whatever originality or extraordinary feature he may possess, will break out in the solid parts and strong lineaments; but the impressions of his habits, and acquired talents, will be found stamped upon his lips, according as he moves or speaks; for there the image of the mind reflects its agitations, repose, and reflections, by indubitable signs, keeping pace with every situation and sentiment.

In the next place let us enlarge our picture, and dwell upon the dignity of Man; for, as Buffon, the French Pliny, says, “sur la face auguste de l'homme est imprimé le caractère de sa dignité.”

### *The Forehead.*

THE Forehead is that part of the face which extends from the foremost roots of the hair down to the eye-brows, and the root of the nose.

The regular or irregular form of the brows, their height and compass, tally with the turn and measure of our faculties, expressing our feelings and ways of thinking.

The skin, fold, colour, ease, and motion of the brow, or temple, contain characters in which the passions and affections of the mind are clearly written; for it is the part that the ancients called the gate of the soul, the temple of blushing modesty.

Nor does the beauty of it consist in the size, and round or square shape, so much as in the exact proportions with other parts of the visage; particularly the inexpressible majesty, severity, and grace.

We are struck with admiration by a beautiful object!—the graces captivate us!—That first degree of perfection is the *pulcher* of the Romans,—the second is their *formosus*, or the *pulchritudo cum venustate*; or, as Milton has most emphatically described our first mother Eve——

Grace was in all her steps, Heav'n in her eye,  
In ev'ry gesture dignity and love.

### *The Eyebrows.*

THE Eyebrows are moving rays, extending crossways like a bow, more or less curved, from the root of the nose to the outward and foremost sides of the temples:—in concert with the forehead and eye-lids,

eyelids, they contribute to mark the physiognomy, by serving as a kind of shade that heightens the forms and colours of a picture.

### *The Eyelids.*

THE eyelids are two fixed wings, round before, hollow backward, and open across.—The form of the opening corresponds with the jutting orb of the eye, and is joined by two angles. Both lids, particularly the upper lid, are covered with lashes, of a triangular form; and, by acting in concert, they contribute to give energy to the language of the eyes.

### *The Eyes.*

THE Eyes are almost perfect globes, fixed in sockets before and behind the eye-lids, close to the optic nerve, and holding by six muscles, which direct their motion.—This whole composition is of a tender, glassy, and finewy substance, containing a humour as brilliant as the finest crystal.

Eyes are of various colours—blue, yellow, gray, whitish, black, and mixed shades of these descriptions. A deep blue, dark, or quite black, gives to the eye that sparkling lustre of diamonds, which we cannot so well perceive in lighter shades of colour. The circular space that encompasses the apple, or ball,

is the iris, or bow, consisting of small tubes, like rays darting around ; and between these very small downy strings, through a microscope, or sometimes with the naked eye, we may perceive a number of little slight and soft grains, appearing to crown the whole circle, as it were with a ray of glory, in a manner that displays the most brilliant colours in man and other animals. In some creatures this perfect symmetry is so striking, as to present a set of regular figures to the philosophic eye ; nor, indeed, can such a sight be seriously contemplated, without those pleasing sensations which attend researches into the secrets of Nature.

The eye shares the motions of the soul ; expressing all its feelings, storms, and agitations, in such true language, as rapidly communicates every impression to the beholder whose heart is open to it and susceptible of sympathy ; while thus sentimental spirit, sound sense, and clear ideas, are conveyed with the force of lightning.

Much as the fire or languor of the eyes contributes to stamp the leading features with their distinguishing perfection, and although they strike us as if they moved in all directions, they have, however, but one circular motion in turning about their center, which they do in such a way, that the pupil appears to go up and down, according as it approaches or removes from the angles.

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*The*

*The Nose.*

LAVATER considers the nose as a kind of pulley-gate to the brain:—this comparison will, perhaps, appear just to men conversant with Gothic architecture.

It is, indeed, the most prominent feature; extending from the lower end and middle of the forehead down to the upper part of the upper lip.

We may divide its parts into the root, the spine or back, the nostrils, and tip.

It's roots join the forehead by the union of their respective bones with the collateral branches of the upper jaw.

The spine is formed by the continued chain of inner bones, and by united gristles, extending downwards to the peak or point.

The hollow consists of two cartilages joined together; round without, and hollow within, which form the passages or nostrils.

The nostrils taper more or less, and turn round in the hind part, having a slight arch, narrower before than backward, and separated by a partition that gives a side view of the upper lip.

All these parts described, being covered with skin, are imperceptible; except when the nose is put in motion to contribute, as it does most essentially, towards the expression of the face.

A hand-

A handsome nose is never seen upon an ugly countenance. Fine eyes frequently accompany deformity; for they are a thousand to one such a prominent, striking feature, as is seldom or never found without a regular set of others; for, being considered alone, it conveys a high idea of the person blest with it, according to the following description:—

The nose ought to be as long as the forehead, with a slight hollow\* at the root.

On the front-view, the spine or foundation should be broad, and run up, in an even line, with both sides, growing a little larger about the middle.

The tip ought to be neither hard nor plump; with the inner compass correctly marked, neither too pointed, nor too wide.

The wings of the nose should be very visible when we come to examine it at the lips, so that the nostrils may be seen to taper elegantly below.

Taken in profile, the nose ought to appear only the third part of its length.

The nostrils should be tapering insensibly; arched lightly at the roof; and equally divided by the side of the upper lip.

\* Neither the true Grecian nose, nor the *Apollo di Belvidere's*, has any hollow in the upper-part of it, where it is united and level with the forehead.

The bridge of the nose should be supported by buttresses, joining above the arch that borders on the orb; nor ought it to be less than half an inch broad.

Although these lines of distinction constitute perfection, it must, nevertheless, be acknowledged, that many men of merit have been ill-treated by Nature in that respect; but we must distinguish their pre-eminence in personal merit. For instance:—

*Lavater* says, that he knew most upright, generous, and intelligent men, so unfortunate as to have small carbuncles on the sides of their noses, notwithstanding those qualities which rendered them soft, pliable, and passive objects; fitted, like wax, to receive delicate impressions, rather than to hold the reins of empire.

An aquiline nose betrays a commanding aspect, an enterprising spirit, and becoming fortitude.

Straight noses hit the right medium between the two extremes; and denote men endowed with courage, energy, and resignation to their fate.

A straight or crooked nose with a broad bottom denotes superior intellects.

The same eminent writer says, that this form is uncommon, and never deceived him in his opinion of it.

Small nostrils indicate timidity and indolence.—  
But when they are firm and extended, such a delicacy

licacy of sentiment may be expected, as occasionally to degenerate into a voluptuous love of pleasure.

### *The Cheeks.*

THE cheeks are thick and fleshy parts, fixed on the sides of the visage, extending from their lower round border to the outward brim of the under-jaw; and from the spherical base to the edges of the nose and lips, which are close to them, and form a part of the countenance.

They follow the motions of the eye-lids, nose, lips, and lower jaw; and while their aspect is an index to the state of the body, they are equally affected by disorders of the mind.—Grief covers them with wrinkles, and they are furrowed over with stupidity.

But, on the other hand, wisdom, experience, and ingenuity, stamp all these outlines with such a polish, as is felt, but cannot be easily expressed; for a man's character, in a moral, constitutional, and intellectual sense, may be ascertained by the degree of care, brightness, and refinement that he has received in all these points of view.

Let an experienced physiognomist examine the bare compass of the section that reaches from the nostril to the chin, just as it strikes him in two ways, at rest and in motion; when it is agitated by tears or laughter, grief or mirth; a generous sympathy,

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or

or an honest indignation; and then he will easily observe how much his features there furnish a text for interesting comments; according as the lines are marked with faint darkish shades, and such delicate touches as express the finest sensibility, or inspire the highest reverence with the most tender affection.

Painters are too careless in making these particular distinctions, to avoid the sameness that marks their master-pieces with cold looks, or mere pictures of men, without their characters and leading passions.

Dimples\* are likewise distinguishing perfections; not peculiar to the fair sex alone, being occasioned by the relaxation of two muscles entwined. It would

#### \*ON SMILES.

The man who wears no smiles upon his face,  
 Nor blushes with the spur of conscious love,  
 But shews a monkey's grin, as knaves will do,  
 Looks down with frowning brows like Death for prey,  
 And views with envious eyes another's joys;  
 Nay, he admits no music in his soul,  
 Nor is he mov'd by honesty of heart  
 To feel the pleasures of a social hour,  
 Or split his sides with laughter-loving dames,  
 Who spread the graces on their dimply cheeks,  
 Communicating wit in sport and glee;

Then

would be needless for us to dwell much on what we feel—their grace and beauty, when they proceed from the feelings of noble, tender, and generous hearts.

### *The Mouth.*

THE mouth is an opening across the face, formed by the lips, cheeks, jaws, teeth, and tongue, and extending to the palate, which separates that gap from the hollow inner part.

There lies the breath of life, through the whole range of Creation; and it is the Orator of the heart and mind, that speaks in various characters:—even silence is often found more expressive than any language.

Indeed, this section of the visage is very different from the general idea attached to the word that describes it; and, if every man was impressed with a due sense of its noble purposes, he would deliver only divine words from such a sanctuary as ought to dignify his actions.

Then, quick'ning every sense in dance or song,  
 They mock that miser's melancholy mood,  
 Till raptures soon intoxicate the brains,  
 While Reason yields her empire for a night,  
 And says (as Shakespeare said for John O'Combe)  
 " Let no such man be trusted."

This organ of speech expresses wisdom and folly ; strength and weakness ; virtue and vice ; knowledge and ignorance ; love and hatred ; sincerity and deceit ; humility and pride ; dissimulation and truth,\*

### *The Lips.*

THE lips are two plump and fixed protuberances, stretching across, or curving a little like an egg, from the bottom of the nostrils, the sides and fore part of the cheeks, to the down upon the chin.

The upper lip is roundish, a little arched within, hollow behind, tallying with the globular form of the teeth and gums, which it covers. It is marked with a kind of gutter for humours running from the nose. The under lip is matched with the other at the orifice, being a larger supporter to it ; rather round without, hollow within, and having a slight base for the upper lip.

- \* " Bred in Lavater's school," Augusta cries,
- " Which best inspires with love,—the mouth or eyes ?"
- " Sweet darling of my soul !" I thus replied,
- With modest wish her question to decide,
- " Let thy fine eyes with kind affection glow—
- " On me those ruby lips a kiss bestow ;
- " Clasp'd in thy arms I could determine never ;
- " But kissing all thy face I'd try for ever !

According

According as they are both open, shut, gaping, stretched out by laughing, or drawn close by sorrow, reflection, and even whistling, we observe their effect upon the human figure.

*The Teeth and Gums.*

Nothing is more striking than the significant expression of teeth, in setting off the visage in every point of view that exhibits their ease and beauty.

They are the hardest, whitest, and only visible bones of man; like irregular cones, fixed in sockets within the jaws, in a row of sixteen to each jaw. Thus the regular number is generally two-and-thirty. They are of three kinds, matched on each side; four upper teeth, two eye-teeth, one on each side, and five grinders in each rank.

Every tooth has, out of the socket, a kind of visible parapet or crowned work; and concealed prongs, or a foundation divided by a circular line or bandage.

The fore-teeth are sharp and roundish; larger in the upper jaw than in the lower one.

The fangs, or eye-teeth, are thicker, rounder, larger, longer, and more pointed than the others.

The grinders are almost square, short, broad, rough, and pitted like diamonds.—The two first are double-pronged; the others have several points; and the tooth of wisdom, the last cut, at the age of puberty,  
is

is rounder at the top, but of a lesser size, and not so pointed as the others.

Every root of the teeth has a small tube, covered with a membrane, that serves as a sheath to the fibres and nerves.

The tooth is composed of two substances; the inside a kind of bark, and the outward part, called enamel, resembles glass or china-ware, in some degree.

Teeth are fastened in their sockets by the band of the gums, which is riveted, as we may say, to their borders. Young, hale, and hearty people have elastic gums, rosy, and glittering; but age relaxes and gives them a paler colour.

The principal use of the teeth is for chewing: the fore-teeth cut and carve; the fangs break, and the grinders bruise food as with a mill-stone.

They are, likewise, not only ornaments, but requisites for the pronounciation of words, particularly the fore-teeth.

Painters are guilty of a great neglect in omitting so essential a part in their historical pieces; for if we consider it attentively, we shall discover this branch of the features to be no less important than expressive, particularly from its close connection with the lips, in representing weakness, hypocrisy, and villany.

*The*

*The Chin.*

THE chin is that hillock whose motions keep pace with the neck and lips, being fixed to the fore-part of the lower jaw, under the lower lip, and projecting before the cheeks.

Long experience has proved to judges of features, that a forward chin denotes a determined character, while a smoother one announces imperfections.

Upon this principle we may distinguish three kinds of chins more or less expressive.

1st. The tapering, or female chin, most common to the fair sex, gives a just ground to suspect a weak side.

2d. The second class runs in a straight line with the under lip, when it is seen sideways. This kind inspires confidence.

3d. The third, or sharp-pointed chin, is a sure sign of an active and ingenious mind.

*The Ears.*

THE ears are two protuberances of a spongy and gristly substance, projecting sideways, and sloping from the centre of the head towards the nose and eyes.

They have several folds and hollows. The first fold, or board, is called *helix*; the second, *anti-helix*,

*helix*, smaller, and more inward; the third, *tragus*, still smaller; and the fourth, *anti-tragus*, pretty forward, and a little sloping within the shell. The lower lobe is soft, without gristle, roundish, rather oval, and containing several cavities, particularly the *scapha*, the passage that communicates with the drum, or tympane.

Although the ear of a man moves less than the same part in other animals, still it is subject to the motions of the skull, and other impressions communicated by sound: nor would it, probably, be so quiet, were it not for the custom of covering a child's ear from its infancy.

Yet we are persuaded that this wing of the body, as it admits of no disguise, bears an expressive feature, and sets off the symmetry of the whole.

### *The Trunk.*

THE trunk is that section of the human body which extends from the lower part of the head to the upper end of the limbs, facing the shoulders, and sloping towards the flank, in the form of a long square, tapering round within side, pretty flat behind, and having before two remarkable cavities, one bony and gristly in its circumference, called the breast, and the other almost all fleshy, except about the back, loins, intestines, &c.

The neck reaches from the head to the upper parts of the breast and back, tapering before, and  
thicken-

thickening behind, corresponding above, and forward, with the base of the lower jaw, and running below upon a line with the shoulder-blade, the hinges, and those recesses where the power of sneezing is deposited.

In the hind and upper part it is connected with the temple; behind and below it is blended with the top of the spine and shoulders, projecting, with varied motions, in the shape of what is commonly called Adam's apple, or the larynx. As this projection follows all the signs made by the human voice, it claims the particular attention of students; indeed, although the features of this part (the neck) are very expressive, they have been hitherto but little known.

*Lavater* acknowledges that it was the first branch of his favourite studies, and had he not been struck with so significant an object of admiration, the world would not have been indebted to him for a line upon Physiognomy.

What expression there is in stiff or easy necks, whose varied postures seem adapted to our faculties!—for the human mind either cringes, advances, or shrinks back.

A well-shaped neck infallibly denotes a steady and resolute character; but natural wens generally accompany ignorance and stupidity, although they proceed partly from the quality of the water, as in Switzerland.

The

The variety of necks is remarkable through the whole range of creation; and among four-footed animals this feature indicates either their force or weakness.

The characteristic traits of the *trunk* furnish a matter of contemplation, to which it is difficult to do justice; but any novelty found in our observations upon it, must plead, in some measure, for a faint description, and such rules as may direct the study of this essential science.

1st. In the first place, a student should ascertain every attitude incident to the trunk.

2d. He should follow, with a curious eye, all those postures connected with the motions of the head and four extremities.

3d. Nor ought he less anxiously to watch those moving springs of respiration, digestion, and other uses of the belly, from which the visible signs, retraced, of contending passions chiefly originate. Every expressive shade of difference, that is furnished by a contrast of rest with anxiety, must be traced, in some degree, so far as to form a just idea of the part affected, in its bearings relative to others.

The well-known \* *Torso*, in the Vatican at Rome, is a perfect model of a well proportioned figure; back

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\* The writer of this note has some doubts whether this masterpiece of ancient sculpture has not been removed to Paris since he

back and belly, with every line that retraces, in all points of view, Herculean strength, majestic grace, and delicate comeliness, mingled in a manner that inspires the admirer of it with a high opinion of Art and Nature at once displayed.

It is here that the sculptor will see the marvellous effect of muscles, tendons, &c. in their elastic tone, together with the beautiful outlines that the whole has received from the Creator's hand.

Through the leading features of such a stump of man, an intelligent pupil will see the violent agitations of the heart, lungs, and midriff, or observe the effect of more refined and calmer feelings.—What a field is open for talents to represent, in a true light, every interesting situation, with such mysteries as surpass the general conception of mankind, and bid defiance to the researches of vulgar eyes! On this occasion, it becomes us to contradict an opinion which has too long prevailed,—that the face alone contains expressive striking features; for, in the estimation of a Physiognomist, all parts of the body are stamped with such marks

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he enjoyed the pleasure of admiring it in the Clementine Museum.

The famous Laocoon, brought to France, will likewise serve as a text upon which modern surgeons may write volumes of commentaries.

as equally denote a man's character, his inclinations, and sensations.

### *The Extremities.*

THE extremities are divided into upper and lower, right and left.

The upper extremities comprehend the shoulders, arms, and hands. Their length is such as is formed by supposing them stretched out with the palm of the hand turned towards the thigh, so far as the fingers reach, or down to the middle of that limb: their bulk ought to be proportioned to the other parts of the body, when it is in good case; and the whole contributes equally to symmetry, with peculiarities striking us so much the more sensibly, when we compare the gladiator, the grinder, and the blacksmith, with the idle man in the same attitude.

The great difficulty of representing properly these extremities proceeds from the different forms of those hafts and hinges by which they are joined together. Hence arises a disproportion of length and bulk between the bones and the fleshy substance; as we may discover from the study of this particular system.

The hand is that part which conveys the greatest number of meanings, and performs so many tasks assigned to it, by collecting in itself the whole force of its adjoining parts, more or less, according to situation;

situation; at the same time that, separately considered, it is perfect in every respect proportioned to the rest, distinguished by legible signs, and animated by the blood that circulates from the head and heart.

Among a million of hands, which might be compared, not one would match another, taken for a model; nay, were it possible to fit a new finger upon a fit that wanted it, however art might imitate nature, the work would be imperfect, and the difference of execution would strike every eye familiarized with their productions; for, with the highest invention, a man could only spy or borrow beauties from objects that he sees with a glance, without being able to conceive the grand scale and wonderful mould in which they are formed.

Thus the hand makes a solemn appeal to our feelings and judgment, with so much the more candour, as it acts fairly and above board, being unable to conceal its least motion, even when it is directed by the greatest villain, or the most cunning hypocrite.

Above twenty joints contribute to those movements which express the varied sensations of the mind, together with bodily pleasure or pain, according as it is used, either as a necessary appendage, or an ornament to the language of the bar, the pulpit, and the stage. Nor need we attempt to describe it better than in Montaigne's following

H words:—

words:—" Quoi des mains? Nous requirons, nous promettons, appellons, congédions, menaçons, prions, supplions, nions, refusons, interrogeons, admirons, nombrons, confessons, repetons, craignons, vergoignons, doutons, instruisons, commandons, infistons, encourageons, jurons, temoignons, accusons, condamnons, absolvons, injurions, meprisons, defions, depitons, flattons, applaudissons, benissons, humilions, moquons, reconcilions, recommandons, exaltons, festoyons, rejouissons, complaignons, attristons, deconfortons, desesperons, étonnons, examinons, taisons."

Such are the various employments of the hand.

The trunk is supported by two lower extremities on the sides, consisting of the Thigh, Knee, Leg, and Foot.

The thigh is longer than the leg, curving a little forward, and rather hollow behind, being about fourteen inches long in a well-set man, thicker above, and, within side, tapering below. It contributes, with the knee-pan, and the upper-part of the leg, to form the knee, a part that is hard to be described, on account of its form, and sundry particles.

The leg is fixed between the foot and thigh, in a perpendicular line with the latter, and forming a contrast to it by the fleshy parts, or calves, and ankle-bones jutting out.

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The foot is joined to the leg, being rather round above, and hollow at the sole, longer before than at the heel: it is higher, broader, and hollower on the inside, more lengthened at the instep, even and longer at the outer part of the heel.

This limb is the foundation or supporter of the human figure; nor will it appear to be less significant than the hand, when we take into consideration its various uses, in dancing, jumping, walking, running, riding, resting, &c. by which every excellence is discovered: nor can we help preferring feet to hands for superior utility, upon reflecting on the many instances of cripples, who, with their stumps, have been able to write, knit, play upon musical instruments, and stir about, or fill some other employment in a sitting posture; but the hands would serve but as poor substitutes for such useful supporters.

Our learned predecessor in this study assures us, that he has distinguished in these two members of the body the signs of sweet temper, pride, and dignity, with other extraordinary qualities; but we shall only add, that, besides their general proportion to other parts, the toes bear a striking likeness of the corresponding thumbs.

*Upon the Attitude of a Man Standing.*

MAN is the only living creature that can stand upright with a bold and unchanging countenance.

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It is true, that a bear is likewise large-footed, and accustomed to raise himself up when he is going to fight; so do monkies, in some degree, imitate the postures of men, as well as that species of beings the ouran-outangs, who come nearest to the human species. But an ape has not so broad a foot; nor need we doubt of the standing attitude being peculiar to us, if we reflect that it has been preserved not only by savages, but likewise in such persons as have grown up wild and ignorant among their only companions the beasts of the field.

Indeed, it is out of the power of a four-footed animal to keep himself firm in the situation where a rational creature stands upon a direct line, passing by the centre of gravity between the *os pubis* and the breech, down to the square left between the soles of his feet, or such a line must fall upon one sole, in case he stood upon a single foot.

We likewise know, that it would be labour in vain to make a corpse stand erect in that manner, for want of those pullies which sustain the living man, in the direction that he takes to balance his weight, by the command of such muscles as are pliable and subservient to the main pillars of his frame.

We may surely be dispensed from giving a full explanation of the admirable machinery that delineates a falling, rising, or slippery posture; but let us add, that, as a man's thighs stretch out more  
than

than in other animals, their point, formed by the narrow part that joins the bones, does not exceed an angle of forty-five degrees. Thus the whole body receives a sufficient prop; for, were not the upper story secured, the structure would give way, from its pressure and natural bias; only one muscle, however, promotes the forward motion, while so many others keep it up.

In short, the head is kept steady by the spine of the neck, extended by various fibres, whose elastic force keeps it from reeling in sleep; while its gentle, forward motion, is favoured by a few inconsiderable strings. The crane, as we may call it, is likewise ballasted, or fortified, in such a way as prevents it from leaning improperly to either side.

All these, and other parts, move continually while we stand; so that ease is naturally sought by a change of attitude, and alternately moving on, or shifting the foot that bears the burden.

## ESSAY XII.

*Upon a Man's Walk.*

A MAN's natural pace is less fatiguing, and easier to be described than a motionless halt; standing, he must have one foot still and firm, as a supporter to the other that the muscles are to put in motion. They both advance alternately, while the leg rises, and the thigh is dragged on as if it were by sliding knots; so that the feet are contracted while the knees move forward, and all, in their turns, perform the tasks assigned to them, in such exercise as varies in speed or agility.

The toes touch the ground, more or less, according to the degree of velocity; the trunk bears upon the columns; but they move one after the other, each making room for the muscles to act their parts; and, in order to relieve them, we naturally lean forward, without consulting the graces, just as mountaineers, particularly on the Alps, are apt to cross summits in a kind of amble, their bodies stooping and sloping, with an apparent degree of ease.

*On*

*On Running and Leaping.*

RUNNING differs from walking no less in pace than the manner of performing this exercise.

The hind part of the foot, according as we raise it, is contracted to such a degree as only to touch the ground with the toes, while the soles are suspended. For this reason, those living creatures who lay down all their feet, are slow; such as man, and the bear; those are swifter who use only their toes; and the swiftest run on tiptoes, as dogs, deer, and horses do.

At the same time that the leg is raised by pliable muscles, the knee advances, and the thigh moves more forcibly; so that the alternate angles formed by different joints become more pointed, and the bones, by stretching, take a larger compass around the basis and the line that they follow, consequently with a faster motion.

The balance is visibly kept forward, rather in an ungraceful manner, as it would be impossible to run quite upright: the arms keep pace with the body, whose weight quickens the march, and checks the respiration.

A leap exceeds a race in violence, as much as running surpasses a common pace. It requires no great exertion of the limbs, for the heels rise; the legs lean forward upon the feet, while

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the

the toes are supported and prepared to make a deep impression upon the ground.

The angle, whose end is at the heel, becomes more pointed; the knee projects forward considerably; the legs bend toward the thighs, which give way at the same time that the body falls downwards; and the leaper's person appears diminished, till he stretches himself out by a violent effort that makes his limbs get up behind together with his body. This recoil is favoured by the board or ground on which he falls, as we see in tumblers on a stage.

Our bodies are capable of greater movements than we generally use, and necessity discovers our powers by sharpening our appetites and invention. Daily examples prove, that maimed men have learnt to write and perform with their feet the duties of their lost hands.

In the same manner, from habit and practice, they not only balance themselves upon the slightest prop, but likewise execute such other feats as display their address, and are not unworthy of our meditation.

## ESSAY XIII.

*On the Five Senses.*

THE organs or instruments used for communicating the senses are natural machines, situated at the end of the nerves adjoining the brain, for the purpose of representing distant objects.

1st. The Eye is a *Camera Obscura*, or a dark ground, that reflects the image of objects, with their proportions, shape, and complexion.

2d. The Ear is a drum, stretched upon a shell, joined by a slight string, and fluttering with the least breath of air.

3d. The Nose is a very large, moist, and twisted tissue, attracting the volatile parts of the air that get into it.

4th. The Tongue is a kind of sponge, that licks up and imbibes such matter as does not hurt it.

5th. The Touch, or Feeling, is formed by soft and small threads, or rushes, which receive the impression of other substances.

Most living creatures are supplied with these organs, but not in the same degree of perfection. Had they been more numerous, we should have had stronger faculties; just as the load-stone attracts iron,

iron, and amber betrays the presence of electric fluid.

Insects alone have fail-yards, of which we do not know the use any more than they can judge of our ears.

It is by force of light that the eye discovers surrounding objects; the ear listens to them from the impulse of air; the touch feels them from their substance and resistance; while the nose smells them by the impression of volatile parts upon nerves connected with it; the tongue tastes soft or soluble matters by the sensation that they make upon the fibres. \*

\* The order and uses of ten pair of nerves are thus explained by a French Poet:—

Le plaisir des parfums nous vient de la premiere,  
 La seconde nous fait jouir de la lumiere.  
 La troisieme à nos yeux donne le mouvement,  
 La quatrieme instruit des secrets d'un amant.  
 La cinquieme parcourt l'une & l'autre machoire,  
 La sixieme peint le mepris & la gloire.  
 La septieme connoit les sons & les accords;  
 La huitieme au dedans fait jouer cent ressorts.  
 La neuvieme au discours tient nôtre langue prête;  
 Et la dixieme enfin meut le col & la tête.

For the benefit of those who understand only the English language, we attempt an imitation or paraphrase of the foregoing verses on the subject discussed.

On viewing Nature's noble plan of things,  
We find Five Senses mov'd by double strings ;  
While every fibre aids the lively sense,  
Ordain'd by wisest laws of Providence.  
The first, in rank, directs our fragrant smell ;  
The second gives us power of seeing well ;  
The third commands the motions of our sight,  
To contemplate with ease the sacred light ;  
The fourth to secret lovers gives the law ;  
The fifth keeps time in moving either jaw ;  
The sixth, by turns, portrays our pride or flight ;  
The seventh asserts to melody a right ;  
To wake the soul with feelings fit for kings,  
The eighth strong nerve employs a hundred springs ;  
The ninth excites the call for daily bread ;  
The tenth sustains, with grace, the neck and head ;  
For Adam's children, upstarts, lords, and kings,  
Are tun'd, like harpsichords, with tender strings.  
Thus music, poetry, and art combine,  
With equal harmony, to draw the line :  
As Handel's notes still charm the British ear,  
So Garrick's language us'd to draw the tear ;  
Inspir'd by Shakespeare and the tragic Muse,—  
For who could tears at their command refuse ?

## ESSAY XIV.

*On Changes produced by the leading Passions, as they are impressed on the human Countenance; and the whole Appearance of the Body, with respect to Painting.*

LE BRUN's sketches contain the principal signs by which the passions manifest themselves, as transports of the soul, by such impressions on our senses as are represented by motions of the body. Thus whatever passes at the seat of life is discovered without disguise, for every passion has a peculiar language and character.

No striking alteration of the muscles proceeds from slight sensations, such as surprise, admiration, esteem, veneration, &c. ; but, although the whole frame seems to be at rest while it keeps pace with peace of mind under these circumstances, they stamp upon the features a particular cast, visible to discerning eyes. For instance ; astonishment is expressed by a backward motion of the head, staring eyes, rising brows, shrivelled forehead, and an open mouth.

But when we admire, our looks recover more of their natural air ; we gape less, and gaze quietly, without over-straining a feature.

We

We find respectful sentiments conveyed with a natural posture, attention, and a slight stoop ; while even the eye-brows slope towards the nose, and curve a little about the temples.

Grief has its particular expressions ; a languishing air, a heavy countenance, a relaxation of all the muscles ; the head carelessly leaning upon either shoulder, prickly eye-brows, half-sunk eyes of a pale yellowish colour ; the corners of the lips pointing downwards, and shewing what we justly call a chap-fallen wretch.

Other emotions depend on mental or constitutional weakness, with shades of difference between them, and greater agitations in their gradations from timidity to fright ; while the soul shrinks with shame upon itself, as we may say, and, from a state of dejection, falls into the lowest degree of misery, —insanity. These varying situations have equally their symptoms marked upon the countenance.

When we are frightened, while our eye-brows stand on ends, with their muscles contracted ; the forehead is wrinkled ; the eye-lids open, and try to conceal themselves under the eye-brows, in such a manner as to discover almost all the white of the eye above the pupil, which falls and hides itself behind the lower lid : the mouth gapes, the lips stretch out, discovering the teeth and gums, with all the veins of the discoloured and disfigured face ; for even the hair then bristles and stands on ends.

Pleasant

Pleasant feelings are marked by infinite ways; gestures, dancing, &c. Immoderate fits of laughter produce distortions worthy of notice; for when we are ready to split our sides, the veins of the neck and face swell; the muscles are puffed up; the eyebrows rise from the middle of the upper lid, and fall downwards about the nose; the eyes are almost shut; the mouth, half open, discovers the teeth; the corners of the lips stretch upwards; the cheeks are strained, and the eyes appear to dissolve in tears; the blood flies up into the face, and while the head is kept backward, the whole body bends a little forward, and the arms, extended, fall upon the flank.

It follows, of course, that when a young painter is to represent rage and despair, he must not forget any attitude that accompanies a wild and frantic look,—the body forward, the upright threatening head, the hands clenched, unless they are armed; a wrinkled forehead, self-biting lips, with their corners half open, to express the grinning, bitter, cruel, and disdainful scoff. During such a storm as he would strive to retrace, the living object alternately changes colour, the upper veins are puffed up, and, as we have before observed, he appears pale as a ghost, and partly raving like a lunatic. These are the sad extremes, against which Reason does not always sufficiently guard the best of men.

ESSAY

## ESSAY XV.

*Anatomical Explanations of Changes produced by the Passions upon the Human Figure.*

WE come now to explain the causes of those singular, various, and astonishing effects, which are produced by motion and sentiments upon the human figure, particularly the countenance. In this pursuit we must consider the subject under the following heads, viz.—

1st. The considerable number of parts covered by the face.

2d. Their different directions, strings, and bands.

3d. Their peculiar movements.

4th. The power of the reflector, or glass, that represents to our sight the state of the body and mind.

5th. The effect of sickness upon the visage, and how the passions are there impressed, without our knowledge and consent.

6th. The degree of force with which the blood flows through the smallest tubes.

7th. The vital spirit poured by the nerves.

8th. The harmony and disorder of such parts of the visage as are a fixed object of meditation to the thinking man.

As

As all these visible alterations can be proved from the animal system in living creatures, we proceed to mention the principal instruments employed in it.

If, for a moment, with the mind's eye, we trace the roof and ceiling of that stupendous piece of architecture, the head, we shall find it most regularly designed and executed, with a solid, well-supported partition-wall, or floor, upon which all the moveable parts of the face are fixed: we then discover in this curious work different avenues, which Nature has wisely left as channels of communication between the inner centre, or vital parts, and the visible front. Beside this wonderful contrivance, a great number of muscles are fixed to the bony, or crown-work, with their moveable points sloping towards the outward skin or surface of the whole. Hence arises a sudden change upon the face, from varied motions of the eyes, brows, and every other part that is continually touched by those tender strings which communicate in so many ways with the soft parts susceptible of impressions.

Independently of these muscular agents, is an incredible quantity of nerves, connected with the brain and the organs of the five senses already described: these have their intricate windings and turnings; being intersected, and advancing forward, they contribute to the texture of the skin. The veins and arteries have the same circuitous route. All these parts are fixed together upon a  
substan-

substantial layer; and as all the chinks between them are filled up by the general consequence of good living, a comely appearance is preserved in addition to a blooming complexion.

It is likewise easy to observe, that the veil, thus formed to cover the visage, is thinner in some parts than in others; being very fine upon the eye-brows, within the nose, and on the lips; but thicker on the forehead, cheeks, and chin.

In support of these observations, let us give some examples to illustrate the theory.

A face painted with joy appears serene, with all the adjoining parts unruffled; for the nervous power is there neither too slow, nor too quick: but a sorrowful countenance is disfigured with wrinkles or plaits, formed by the shrinking muscles, from the brows to the lips. This effect appears to proceed from the disorder of the nerves, affected by the irritation of the mind.

A profound melancholy is marked in stronger characters. The nervous system being deranged, those finer strings, the muscles, are more contracted:—the eye-lids scarcely perform their duty; or, if they open half way, it is only to let out, through their sluices, a flood of tears. The muscles of the nose and mouth shrink with violence—the eye-brows are knitted—twitchings follow, and bring on a temporary interruption of breath, from the ruffling of the nerves communicating with the mid-

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riff

riff and the feat of the lungs; where, the air being let out by their friction and convulsion, that difficulty of breathing is attended with symptoms familiar to every observer, who finds the whole frame shaken and sinking under its own weight for want of those elastic springs which promote the circulation of the blood: Hence proceeds a swoon, marked by the colour of death; and occasionally relieved by such a quick perspiration, as extracts a moisture that may be called, under those circumstances, the tears or exhalations of the whole body. All the muscles are exposed to a still greater disorder by a violent agitation of the nerves, when it is caused by a fit of passion.—The visage is inflamed—the eyes sparkle—the fleshy fibres shrink at the mouth, nose, forehead, eye-brows, and eye-lids;—the lower jaw starts up; while the lips alternately join and stretch, discovering the flaming tongue and teeth. Nor is the internal storm less boisterous; from the increase of vital fluid by the nervous conductors, which are shot upwards by the strongest and most tender strings of a feeling mind.

What strikes us as deserving the highest admiration, is, the over-ruling command of the countenance which those nerves possess, from their twisted form, to such a degree of swiftness and fidelity, as to betray the secrets of our hearts, and prove dissimulation even in the greatest hypocrite.

Since

Since an uncommon flush and sudden paleness are infallible signs of opposite agitations, Nature has wisely contrived to confine the tubes and veins of the face within a considerable number of chains, for the purpose of fixing instantly upon the physiognomy a stamp of the passions in characters, making a deeper impression with the hand of Time; so that the principle of life (the blood) having tinged the surface, according to our varying affections and habits, their marks are never effaced; nor is it then difficult for a judge of features to read at once the lines in old men, so as to know their professions and dispositions.

The complexion is likewise affected by less lively sensations, as when we blush from shame without our will, in a manner that must be accounted for by considering the spot that discovers the internal secret agitation producing such a change.

The veins and arteries of the cheeks are connected with others in a chain of circulation, supported by the upper and lower nerves, which act and react upon the whole mass of blood; returning quickly through those channels, after having been kept back with the pressure accompanying the sentiment marked by blushes; thus proceeding from every nerve that agitates our senses, more or less, according to circumstances and situations.

Besides, in the muscular fibres of the arteries, there is a moving power—a centre, from which  
 1 2 spring

spring out the slender nervous strings varying in proportion to the sensations produced in the mind; but, although their strength is not exerted on all occasions, they act in concert with every nerve irritated, as in a general convulsion, arising from a disorder of the whole system, when the circulating fluid ceases to flow in some particular parts.

It is not, however, from sickness alone that paleness originates; for it equally attends such fits of passion as convulse the frame; but moderate anger makes a different impression, by animating the countenance like a flow of spirits.

The chain of connection kept up by the nerves is very differently displayed in fear, terror, melancholy, and such other impressions as are made by an indifference or aversion to particular objects. The sudden change of colour then continues, more or less, according to the force of such sensations.

An entire relaxation of the nerves has another effect upon the tubes and conductors which distribute the vital principle:—the muscular fibres lose their elastic power; and as all the organs of sensation abound in the arteries of the face more than in any other part, their inactivity stops the red fluid from rising there, and thus occasions the pale colour that indicates the want of animation, in every sense of the word; for the body corresponds exactly with the mind in representing and sharing all their feelings.

This

This correspondence is maintained by various imperceptible springs of action, by which those instruments of sensation (the nerves) are moved in perfect harmony wherever they are most susceptible of impressions; particularly on tender parts; consisting, like the lips, of a kind of gauze, or a thin veil, for blushing beauty. We need not, therefore, be at a loss to account for the inexpressible raptures communicated through every vein by an English\* bust† from the fair object of our love; for, like lightning, it pierces the soul, and makes the heart leap with exquisite joys of sensibility!

Let us now trace, with the eyes of anatomists, the wonderful effect of those delicious impressions made by kisses.—The delicate texture of the lips is interwoven with a still finer tissue than any other in the tender part formed by branches of the fifth pair of nerves, connected with others placed in the deepest recesses of the brain, and surface of the head,—the whole being united with those muscles of the

\* It is necessary to make a distinction between a French and an English kiss, in order to clear up the point of argument beyond dispute; for as, in France, a modest lady would only permit her cheeks to be touched by a lover, the sensation would not be so lively there as in England, where no idea of indelicacy prevents any fair maid from proving the justice of assertions applicable only to salutes of a different nature.

† Un Baizer à L'Anglois.

neck which are entwined with the most refined feelings. The nerve that promotes such a pleasing sense as thrills through every vein has the strongest elastic springs, acting in concert with the eighth class, that penetrates the bosom, and affects the heart; while others, at the ribs and lower parts, move in perfect harmony with them in their reciprocal impulse and re-action upon the human frame.

After having thus explained the series of nervous conductors, we may conceive how that electric stroke is felt and communicated in such a manner, as no language can express in terms suited to our ideas.

In another point of view, those seats of pleasure, which cannot be so well described as we could wish, we mean the lips, equally discover the foresight of Nature in providing for our daily wants, by fixing there the taste that judges the quality of food and beverage intended to prolong or comfort life.

From a chain of circumstances partly related, might we not infer, with a degree of reason, that all the impressions on our bodies are at first merely local, or confined to a particular spot, where, according as they are received by the organs of sense, a nervous ruling power communicates them by subordinate ramifications issuing from the centre, like so many different streams which branch out from the same spring, with a continued mutual intercourse to keep up an equal flood, except when their

their channels are injured by storms or inundations; just so the human constitution is agitated by passion, the affections of the soul, and disorders of the body.

Let us, then, conclude, that, from the cradle to the grave, the happiness of our lives depends, in great measure, on a well-modelled nervous system;—such as gives a quick relish to all the endearments of love and friendship. But surely we do not profane these words by applying them to those pure, disinterested sentiments, which produce the generous sacrifice of every personal concern to the objects of our affection.

In whatever light we contemplate the form and organization of man, he appears designed to be lord of the whole creation! What a glorious work it was for the Supreme Designer to animate a mass of clay in such a wonderful way, as to stamp upon it thought, feeling, and moral character!

What mortal hand will draw just outlines of the inner fortifications surrounding his head and crown!

Can a living creature, a pillar of flesh and blood, attain to such a degree of intellectual powers as alternately rest and ferment? His head is covered by the Divinity with comely locks, appearing as if they were the trees of a sacred forest shading a sanctuary. Thus we ought to be struck with reverential awe on viewing an object that a glass or a warm imagination can easily magnify into a mountain.

tain, flashed with lightning sufficient to embellish, ravage, or destroy a world !

And in such a point of view, how expressive is that grove which crowns the brow of a hill devoted to meditation !

The neck, without expressing a man's thoughts, indicates what he is going to say, with the freedom, ease, and dignity becoming his rank on earth ; for it is a strong pillar, that may be considered as an emblem of power and dominion.

Whenever this part has its defects, it is a sign of weakness.

The human countenance is an image of the Deity, containing the reflection of his soul.

His forehead is a table of brass, on which various sentiments are engraven in indelible characters ; that is, the seat of joy and melancholy, wisdom and ignorance, honour and shame, honesty and deceit.

His brows are covered with an arch like a rainbow,—the signal of peace when it is at rest ; but its disorder denotes agitations of the mind. This feature has a peculiar grace when the circle is regularly drawn.

The nose is a land-mark, like a mountain that separates two vallies.

The eyes appear to be of glass, consequently windows for the soul ; transparent globes, sources of light and life : their shape deserves particular attention in forming an idea or likeness of a person,  
from

from the state and situation of the sockets. Nor ought we to take less notice of those parts which connect the eye-brows with the nose, where the stamp of the human will, and the signs of active life, are most conspicuous.

The noble, deep, and hidden sense of hearing is placed on the sides; and, as a man ought to hear around for himself alone, his ear is plain, without ornaments, or beautified only by its depth, polish, and delicacy.

Upon a part of the face there is a kind of cloud, that marks ravenous appetite, and an excessive love of pleasure. The upper lip expresses strongly such leading foibles; for a rakish life weakens it, pride and passion bend it, cunning sharpens it, kindness rounds it, love and enjoyments give it an inexpressible charm.

A fine row of teeth is likewise a desirable perfection. A pure mouth is, in every sense, a recommendation of the whole person; and like a beautiful porch-door that corresponds with a palace for the voice, which we may call the orator of the heart and soul, since it communicates the language of the most tender sentiments.

The under lip begins to form the chin, and the jaw-bone compleats the ellipsis or oval form of the visage, as a key-stone of the vault in the noble structure delineated. This part, according to Grecian models, ought to taper insensibly.

But

But as descriptions of this kind seldom afford novelty sufficiently agreeable to the bulk of plain folks, however disposed they may be to reflect upon their journey through life, if we cannot strew over with flowers the little way that the gentle reader has to pass with us, let him smile, at least, on our endeavours to keep up a flow of spirits, by describing in poetry that enlivening effect of electricity,—the strong sensation which forms the chief subject of this Essay. Nor need we rove in fancy to France or Italy in search of as lively a scene as ever Titian drew.

#### ON INNOCENT KISSES.

In merry days of youth my heart would yield  
To Beauty, when Diana took the field;  
In rural innocence to run a race,  
Or share the toils and pleasures of the chase  
With growing Nymphs, from whom I chose the best,  
Like Venus, smiling in the stream undrest;  
For after hunting it was then the mode  
For girls and boys to bathe beside the road.  
There my delight was, playing on the flute,  
Far from those scenes where Bacchus grows a brute;  
Proud as my loyal friend of Orange-grove,  
I thought no treasure equal to my love:  
Fearful I gaz'd, in silence, like a fool  
Who saw the Dee embracing Balz Pool;  
But, born a bard, whose soul enjoy'd the sight,  
I spoke for favour thus, with hopes, till night:—  
Bathe on, my Pamela, the clock strikes five,  
To quickest sense of feeling be alive;

Conceal

Conceal thy beauties in the grateful flood,  
 Enough those ruby lips inflame my blood.  
 Blest with thy smiles, admiring every grace,  
 A painter longs to draw thy blooming face;  
 Thy fresh complexion, dimples, and the rose  
 That gives electric kisses, while he glows  
 With zeal to paint, as Adam painted Eve,  
 When Parson Poole shall bless and give us leave;  
 For, said a Monarch of immortal name,  
 One Kiss is worth a thousand years in fame!

ESSAY

## ESSAY XVI.

*Upon Physiognomy, and the Study of Features ;  
with Rules, &c.*

BEFORE we lay down the principles of this science, it becomes us to draw a line of distinction between differences in particular limbs and features, and that general uniformity which is visible through the whole creation.

Nature not only draws, but executes, all her designs upon an universal scale, where every ray of glory is pointed towards a common center. The heart beats with the same spark of life that moves the finger; the same Divine Power modelled the skull and the nails. Art differs by only matching pieces of works designed by human genius.

But in the great and marvellous mould every creature seems to have been cast at once : all the parts are compact ; the stock rises into a stalk that produces branches bearing fruit and flowers, the whole being united, down to the roots of the tree.

Yet, notwithstanding their close union, the production of one branch, A, cannot be said to grow upon another, B ; much less does it belong to a  
different

different vegetable, for it contains only the quality originally assigned.

Thus one man's finger would not suit another's hand, for every particle in his frame is exactly matched to the whole ; nor does the blood at his toes differ from the fluid that animates his bosom : the nerves and bones are equally proportioned to fit only an individual separately considered ; so that, from a limb or joint, we may ascertain the just measure of other principal parts. If his head be oval, the whole takes the same form ; if it be round or square, the rest partakes of such a distinguishing, but uniform, appearance in root and branch ; nor can the smallest particles be taken away, or added, without deranging the regular system. This symmetry is peculiar to every rational creature in his structure, complexion, hair, veins, voice, gait, manners, and passions ; but with these peculiarities he has full scope for his mental powers and feelings, without being able to overleap the bounds assigned by Providence.

It must, however, be granted, notwithstanding the permanent general sameness, that every countenance is constantly subject to such changes as are merely personal in a particular character ; but still a man can only change himself, or a motion, in a style that is all his own ; for affectation or imitation may be distinguished from originality.

*Lavater*

*Lavater* says, that he blushes for the age he lives in; being under the necessity of discussing matters so self-evident, as to flash conviction when they come to be viewed with the clear light of Reason, although they have been strangely argued by pretended philosophers.

Nature forms all creatures perfect, in a mould where nothing seems to have been cast in separate pieces, to be gradually matched with each other, as a mortal sculptor would do before he could imitate, in any degree, the best models. This truth is then visible all over the universe, from man down to the lowest plant; nor should we compare with either the most beautiful Mosaic work, without feeling how ineffectual our efforts would be to copy such an original.

As an introduction to the knowledge of features, it is indispensable to study the order and harmony of the visage in all its component parts, so far as to comprehend and see, at one view, all the distinguishing natural lines which differ from the effect of art, feigning, or dissimulation; nor must a student despair of making a successful progress, whenever he can discern every kind of such original distinctions as form a striking contrast with superficial appearances, acquired by thinking, habit, and education; for, whatever polish may be derived from these circumstances, a man's soul is to be seen through the natural veil (the body), independent of such gradual

gradual or casual alterations as were not formed by the great Creative hand.

By continually comparing notes within ourselves, or reaping the fruit of daily experience in the circle of our friends, and looking, with penetrating eyes, at their lineaments, not only as impressed with past lives, but according as we have known them, without disguise, from an early period, we may be able to ascertain the distinction betwixt the natural stamp and their acquired air. It is then only that we shall be qualified to judge how much those outward signs correspond with the most secret inclinations, since every deviation from the paths of Virtue will leave a track behind. A course of excesses or iniquity disfigures a man, and degrades him in his own estimation, as well as in the world's eye, which he constantly avoids; for, being grown ugly, or scarcely known to his neighbours, he dares not look them full in the face.

Such studies as these should be accompanied with varied observations and continual demonstrations in all the walks of life, in scenes of business and pleasure, as well as in the haunts of indolence and dissipation.

Thus piercing eyes would become familiarized with what might be called merely contracted or professional looks, while the judgment was exercised in forming a standard of opinions, upon examples  
correspond

corresponding with precepts and the fruits of reflection.

In no profession could an error be so fatal, as in pronouncing rashly upon a man's character and good name from his leading features, according as they strike a stranger, who had no better criterion for his determination of this point. A false principle in our researches might, therefore, be productive of bad consequences to society.

A few safe rules may, however, be drawn from long contemplation, consistent with a train of thoughts, partly suggested by *Lavater*.

On this occasion we address, particularly, the rising generation, under an idea that youth must feel it a delightful task to trace the marks of ideas, according as they shoot, with the different degrees of sympathy and antipathy felt even by children at an early age. Such feelings for and against strangers, at first sight, must not, however, be confounded with impressions of beauty or deformity, and notions conceived from a previous acquaintance, affection, or prejudice.

Nor are our wishes for success at any game between two unknown players determined by considerations of rank and fortune when we have no interest at stake, especially if both their persons appear equally amiable; but their souls are not so to the mind's eye, and that inward monitor which directs our caprice and fellow-feelings.

Indeed,

Indeed, the study of human features is what we all apply to, more or less, without forming a regular system from our observations, for the purpose of accomplishing the grand object in view, which is to trace effects to their causes by the lines and movements of the face, so far as to know and distinguish the different qualities of the heart and mind, together with their true respective signs, as applicable to all cases and situations: in short, it is learning to read the most essential pages in the great book and language of Nature.

In this career a pupil should act like a prudent architect, who draws the plan of an edifice, and makes an estimate of the expences, before he begins to execute it, without knowing whether the means correspond with his design. In like manner *Lavater's* disciples, and our's, ought to feel their own zeal, faith, and faculties, equal to the objects which we wish them to attain from the following lessons on this important subject.

1st. In the first place we must examine carefully every substance inherent in the human species, and what distinguishes our flesh and blood from brutes and the vegetable creation, in order to feel an adequate idea of our own importance in the scale of beings.

2dly. We must afterwards take not only each limb and feature, but their harmony connected with the whole, as objects to be separately studied; nor

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should

should our knowledge of proportions be acquired only from books, but practice; in measuring them under the eyes of able masters, who will point out the cause of so many imperfect designs, and consequently false estimates of Nature's works, founded on an old-standing neglect of discriminating between straight and crooked lines.

When all parts of the visage and body are harmonized with perpendicular lines, not only beauty, but even sound sense, a dignified character, and other qualities, are generally found to correspond with this symmetry, or any other that may be observed in an opposite direction.

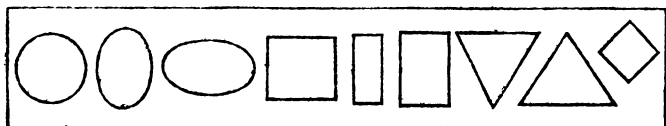
3dly. The particular signs and characters stamped upon the face are to be no less attentively considered.

In drawing faces, a Painter and Physiognomist should begin with such as have striking traits, peculiar to judges or philosophers, as well as to idiots and men of feeling, or others of a quite different description.

Such a character must be thoroughly studied in all points of view, just as if we were to draw his picture from the life, to be constantly compared with the living original. Not only the stature, but every part of such a person, must be well examined, just as if the measure of the whole proportions were to be taken by perpendicular and horizontal lines,

so far as to determine the relative symmetry of his leading features ;—the forehead, nose, mouth, chin, and particularly the form, colour, size, depth, and turn of his eyes.

In examining a visage in a forward view, the first consideration is, whether it be round, oval, square, triangular, or resembling, more or less, one of the following forms of most, if not all, human faces, viz.—



In the next place, we must compare a profile of the same face with half of either of these models, before ascertaining the perpendicular length of the three ordinary sections,—the forehead, nose, and chin, upwards and downwards, with their respective bearings, or symmetrical proportions.

This operation is easily performed by an ideal line drawn from the deepest point or root of the nose down to the tip of the upper lip ; by which means their proportions are discovered in three ways,—for their perpendicular form up and down, their superficial, and inward direction, above and below.

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This appears to be the only method of fixing a fundamental principle for acquiring the theory and improving the practice of physiology, according to the rules adopted by the best painters in their profession. After a just impression of these traits, the forehead, the eye-brows, the nose, and intervening space, ought to attract equally the student's attention; particularly that striking angle which is formed by the tip of the nose and upper lip, either straight, flat, or pointed, with such a difference in the length on the sides as will not escape his notice.

Seen sideways, the mouth strikes us only in three principal forms; either the upper lip passes over the under one, or the latter pouts up, or both when closed are equal on a parallel line.

A right description of the chin admits of the same distinctions; it is either perpendicular, a peak, or sloping inwards: the bottom will form an horizontal line more or less straight. The bent in the jaw-bone deserves the closest observation, as it indicates different qualities of the mind.

On this occasion the great Professor *Lavater* says, that osteology, or the system of the bones, were it properly studied, would produce such discoveries as he points out, by asserting that an able blind-folded Physiognomist might find out, in great measure, a character that had bid defiance to all researches,

researches, merely by handling properly his jaw-bone.

Certain it is, however, that this single part, well studied in profile, has served as a clue for unfolding extraordinary faculties in some individuals, whose other features were not sufficiently expressive, nor proportioned to their mental power. Painters and designers cannot, therefore, take too much pains in representing this singular feature in the most prominent light of which it is susceptible. Thus they will do credit to the useful arts that they profess, in copying Nature, and reviving the objects of our love, respect, and veneration.

In regard to the eye, we must first measure its distance from the radical part of the nose, and then examine its size and colour, together with the outlines and compass of the eye-lids. Thus a countenance becomes an object of study, just as if every line in it were but a part of a poem to be learned by heart.

In like manner, a poet would cast a glance over a favourite composition, run over the chief divisions, and impress on his memory the arrangement of the whole, so as soon to be able to repeat every verse, by consulting occasionally the book that he admired.

When this fundamental Physiognomical knowledge is acquired, by studying the face of an eccentric genius, a strong resemblance of it should be

looked for in all the pupil's walks, until he found one that corresponded exactly with the living object of his studies.

This likeness will be seen best in the foreheads; for if they are alike there, the other parts will doubtless prove their uniform affinity.

The great secret of a Physiognomist is, to abstract and view separately those leading features of which he should watch every motion and direction, as if each were placed by itself, unconnected with others.

Upon finding out a perfect walking copy of the original studied, the same course of observations upon it ought to be followed, even by sifting into the personal character of that man, compared with the other, especially with regard to the most striking signs, and those slight shades of difference between them both in every sense.

If upon this comparison they resembled each other in all respects perfectly, their exterior appearance would prove the conformity of minds and intellects; nor ought this opinion to be controverted, until two men so described were brought together, each possessing a different turn of mind from the other, notwithstanding their same remarkable faces.

In order to prove or contradict that assertion, we should watch the unguarded moment when they display their real dispositions and characters without disguise: if then the line of distinction caused  
by

by the moving muscles corresponded in both these persons, the conformity of their characters would be manifest beyond dispute.

Thus, were such an uncommon feature discovered in any singular man, as to be noticed again only in the countenance of an illustrious character, this distinguishing mark might be safely pronounced as the surest criterion by which we could judge and find out any shade of difference.

This idea may be best cleared up by mentioning a case in point.

Beside many traits which the great *Haller* had in common with other enlightened beings, he was distinguished by what might be called a ray of literary glory, or a circle under his lower eye-lid, and such as had never been noticed in any other mortal.

Consequently that trait has not yet been understood; but were it discovered in any other individual, there would be full scope for enquiring whether his genius was like *Haller's* in any respect. At all events, were two faces found with a similar honourable stamp, we might take pride in having discovered a new letter of the Physiographical alphabet.

It is, nevertheless, within the limits of probability, that so celebrated a writer may have possessed particular foibles, expressed by that particular mark; nor is it impossible that the weakest man may be

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marked

marked like him, without that superior understanding, of which we suppose that Swift's author bore the significant impression.

In the mean time, it is prudent to suspend our judgment upon these speculative notions.

In the choice of objects for studying this science of reading faces, we cannot take too much notice of original and eccentric characters, extremes of vice and virtue, kindness and brutality, slavish ignorance opposed to the heavenly gift of poetry, generosity and selfishness, for the purpose of furnishing contrasts, as constant subjects of contemplation; nor ought we to lose sight of those situations where man is reduced to the most abject state of misery.

With this view we might visit the receptacles of lunatics; trace the causes of their insanity, and observe every shade that distinguishes love, melancholy, rage, or disappointment, according as it breaks out, unrestrained by reason and habits of social life.

In scenes like these the nervous system is displayed without art or dissimulation; all the tender strings of feeling are differently affected, and accompanied with peculiarly natural impressions.

Nor ought a Physiognomist to be less anxious to mingle with the most enlightened, down to the least polished societies, in order to compare accurately the lowest degree of sense bordering upon instinct, with that superior understanding, which  
would

would be seen brilliant, just as light is valued when we come out of darkness.

But should it appear too difficult a task to pursue a plan of studies on a large scale, comprehending all parts of the visage, there are two important lines to be followed, invariably, by those who wish to unfold every place in animated stuff, marked with a slit in the mouth, and a line drawn by the upper lid upon the eye-ball; for these lineaments present an abstract or abridgement of a man's face, with a key that the active spirit of curiosity might employ in sifting into the mysteries of our existence, and decyphering such a secret correspondence of the soul as exhibits a participation of the Divine essence.

The best painters have often neglected those traits which defy an inexperienced eye, by their soft, delicate, and moveable substance; but they are best distinguished in profile. If, however, imitative art cannot seize them, let the Physiognomist read over carefully the fine and easier passage from the forehead down to the mouth, before he transcribes it on his mind or paper. Those double features, taken alternately from either side of the face, will furnish a long exercise for a pupil, who must feel, as he draws, their perfect equality.

His progress would not be stopped, were he, for some time, to amuse himself with drawing or studying nothing else but the compass of the upper  
eye-

eye-lid, and the orifice of the mouth, together with the order and arrangement of every line.

The other lineaments might be justly represented by shadows, or *silhouettes*, so far as to be separately drawn, studied, and examined with mathematical precision.

Although these leading features are the most essential, others deserve particular notice ; for no part ought to be slighted, as connected with the whole, impressed with a man's character, and proving the most perfect symmetry in the workmanship of the Supreme designer, whose glorious works were cast in one mould, unlike unfinished master-pieces of art. Thus every kind of eyes is found to be matched with corresponding ears, front, and hair, according to the wisest order of things.

Frequently a neglected part of a book serves to clear up obscure passages ; so the slightest line may serve to unravel a whole set of features and complexion. Just as an overture conveys to a cultivated ear the ground-work of an opera, so we must consider every part of the body as an important link of the chain that unites the perfect human figure ; the whole being justly compared to a concert of music, where not the least note must be omitted to preserve the harmony designed.

In the pursuit of these studies the pupil should be humoured in following his inclinations for the favourite object of his researches just as it strikes him ;

him ; because a passion for any branch of knowledge produces the greatest proficiency conducive to general improvements in liberal arts and professions.

The art of drawing profiles, or shadows, cannot be too strongly recommended to a young Physiognomist, as one of the best methods of acquiring a just idea of characteristical outlines to be drawn exactly for his models.

As this exactitude depends on the manner of forming these sketches from the reflection of a face, always weak upon paper, a solar microscope is used to remedy the defect, while the head to be drawn is placed, free and easy, as close to the wall as possible.

For this purpose, a board, hollow below, is placed upon the shoulder, four feet five to seven inches above the ground, and covered with soft paper fastened and sealed with wax over the holes in the wood.

Another more convenient method for drawing shades is, by means of a mirrour, hollowed below, and covered with oil-cloth. The shade is thus quickly drawn, and when it is taken from the frame the lines are retouched wherever the reflected outlines are too weakly impressed. Then it may be diminished to a miniature, by avoiding to blunt the edges, or disorder the angles, of this picture.

One of these diminutive copies is blackened, and the second is preserved blank, for keeping the measure

ture of the inward case. Afterwards the large *silhouette* is hung up, perpendicularly, to serve as a model for the smaller profile.

It is by the frequent practice of designing, accompanied with remarks and comparisons drawn from the Lavaterian school, that a gradual improvement may be made by any youth qualified and disposed to excel, while at every step he feels convinced how much the slightest deviation turns a portrait into a caricature.

When a collection of such profiles is procured of well-drawn characters, they should be classed under proper heads; but the line of distinction between them must not be formed by respect for intellectual powers, or moral qualities, but wholly from a view of Physiognomical analogy; for, whatever traits may characterize men for their talents and virtues, there is such an infinite variety of excellence and imperfections under general denominations, that we are warranted in presuming a proportioned unlikeness of their outward significant signs of merit. Consequently it would be the greatest absurdity to class together two heads of men of genius, merely because they were of that description, without any other resemblance, as a ground of expectation for finding them alike; for, probably, they would not resemble in the least, or form a perfect contrast to, each other.

But

But in the arrangement of profiles proposed, the forehead ought to form that distinguishing feature, according to which their various classes might be justly fixed. Then were two foreheads to present a striking likeness, there would be a foundation to suppose a degree of conformity in the souls which animated any two bodies with such peculiarities as might appear from the corresponding curve and angle, which could be measured exactly, upon the large shadow, from the top of the head down to that invisible line which passes across the crown to the root of the nose and eye-brows.

The result of such observations will be a conviction that similar outlines of the head are attended with an equal conformity of faculties, and a like way of seeing, thinking, and feeling. It will likewise be found, that, as every part of the globe has its distinct latitude and climate, so all faces and foreheads are shaped in a manner calculated for their height and degree of mental capacity.

Such remarks as these admit of improvements, from a particular alphabet to be composed for the register and classing of foreheads; so that any one might be distinguished, at first sight, by a letter expressing its class, together with its generical and particular name.

Our great master (*Lavater*) has promised us a Treatise on this subject, that shall comprize every different form of foreheads. In the mean time, he  
advise

advise every student to compose a scale of them, for his own use, perfectly regular, and founded on invariable mathematical rules.

It is also a matter of importance to know what characters are most truly represented by shades, and appear in their true light. We shall find that lively people are drawn so in a more faithful manner than those who are mere passive and feeling beings.

Moreover, in learning to read faces, it should be the student's delight to draw profiles in all ways from Nature, trusting to his memory, sometimes, so far as to add an eye, a mouth, or another feature, wanted to turn them into full faces; as he might do, for pastime or instruction, while he sifted into the meaning of those positive signs which he strove to copy, in various points of view, as a fund for his experiments.

He would, likewise, derive equal pleasure and advantage from a repetition of his essays to analyse the most impenetrable or unintelligible visage, by separating every feature from the complicated mass.

The base of that frontispiece of surprising architecture contains the sum-total of the outlines centering in the skull, and all the ramifications darting from the crown of the head. Upon this principle, experience proves what reason shews,—that this fundamental line in a hearty man expresses the degree of his capacity and perfection.

From

From this contour an able Physiognomist might also judge of the general characters of a crowd, and, therefore, it cannot be too frequently drawn, measured, and observed in every possible light; for it escapes the first glance; but habit will render it more perceptible in proper subjects. For instance; in a Roman Catholic church, when priests stoop with their bald crowns, interesting remarks might be made on their bare upper circle; for so much does this part differ in a multitude, that a professor of Physiognomy, like *Lavater*, would distinguish by it the various descriptions of people assembled at his door.

Indeed, it is not easy to observe young men well, while they are awake and feelingly alive in the bustle of business.

For that reason, they ought to be watched in those unguarded hours of sleep, when they, particularly children, betray by their attitudes the harmony of the body, face, skin, and limbs.

Even the mansions of the dead might be visited, because their faces acquire, in eternal rest, such an expressive composure as is not perceptible in any other situation, nor till they have ceased to breathe.

A man is more or less strained or distorted with the agitations of this world; but in his coffin, if unchanged by violent convulsions, he becomes a fit subject for students of Physiognomy, who exercise no imaginary cruelty.

They

They should also retrace their designs in making comparative remarks upon ancient statues, or at least on moulded figures, which might be copied in different ways, and compared with their own sketches drawn from life.

After having thus improved in the art of *taking off* the solid parts and striking differences between models and copies, their next amusement might be to set up the bust of Locke, or Newton, to exhibit a contrast to another of an idiot, while they measured, copied, and considered both attentively; and if then, from their feelings, they knew themselves to be judges of faces, their faith in this science would be a sure omen of greater advancement.

But they would make a still quicker progress, should the idea in contemplation be realized of making a *frontometre* (an instrument for measuring the front, or forehead), in order to distinguish, at one view, those collateral features which are the true signs of lively, base, dull, and elevated minds.

Nor would it be a matter of unpleasant consequence to perform exercises, or read lectures, upon the skulls of deceased eminent personages, drawn in shadows or profiles, and placed in a row, where their triangular form would exhibit a striking object of meditation; but, as either respect for the ashes of our ancestors, or false delicacy, forbids researches beyond the grave, we advise our disciples to be very reserved in their conduct and discourse,  
until

until they shall have found their judgement, in matters of this nature, confirmed by evidence and a train of concurring circumstances. Thus divesting themselves of vanity, beginners ought only to try their skill at a proper time and place, with equal diffidence and moderation, if they wish to render Physiology one of the most useful, pleasant, and honourable sciences.

Another important resource is to be found in those ancient and modern medals which exhibit a curious variety of countenances, and display the caprice of Nature, with an uniformity, however, of virtues or imperfections.

A good Physiognomist ought to be a thinking man, independent in spirit, rich in ideas, and able to express them in the principal languages of Europe; nay, he should even be qualified to compose a new dictionary of words and technical terms suited to his profession. Thus he might keep a register of extraordinary visages, duly classed and specified, according to the most approved systems; nor ought he to be at a loss to distinguish, at once, the different degrees of passions, affections; religious, national, and professional looks.

But, before attempting to give names to sensations, symptoms, and appearances, he ought to be capable of representing them justly with his pen and his pencil.

L

A know-

A knowledge of more than one foreign language is of the utmost importance for opening a communication with those absent or departed spirits, whose congenial thoughts pave the way to trace a system equally calculated for information and entertainment. It is true, that many plain folks either do not believe, or affect to ridicule, the fabric of opinions designed for those salutary ends; but, as they pass along the crowded walks of both sexes, let us appeal to their feelings, in order to know whether they are not alternately impressed with love, reverence, admiration, envy, flight, and indifference.

If so, it is evident that they see, read, and try to decypher the type of Physiography on every reflecting mirror that they meet. Will it, then, be denied that such learning is most excellent?

He is a false critic who praises or condemns a book of which he has seen no more than the print, or binding. A painter, however, draws the soldier, justly, with all his accoutrements and military airs.

But the Physiographer must despair of drawing faithful pictures while he is biased by partiality arising from the consideration of birth, wealth, and power, or prejudiced by a sudden reverse of fortune, borne with humility, fortitude, and resignation.\*

A list,

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\* As examples are better than precepts, we may easily suppose a case in point:—We hear of two men suffering the same fate in a different

A list, already procured, of four hundred differing human heads might be gradually increased by such

ferent manner. — A venerable elder of the land, after having lived in affluence, is brought down, by an act of arbitrary government, with his gray hairs in sorrow to the grave! We may observe him wearing apace —

Half bent with worldly cares he moves along;  
His brows are overcast, his visage low'rs,  
While heavily in tears his eyes look down  
To shun the slightful pity of a friend,  
Who us'd to share his hospitable house,  
But feels no reverence for age oppress'd  
By war, the scourge of nations, and his bane :—  
Nay, all *Lavater* sees at once denotes  
A speedy dissolution with the cause, —  
The plague incurable — A broken heart!

But under similar circumstances the companion of his youth is seen to weather the same storm with a serene countenance, looking up to Heaven, enjoying life as it passes, with spirits becoming a rational creature.

Whence, then, arises such a difference in feeling and discovering their secret emotions, if we imagine them both well born and bred in Wales, endowed with equal qualities of the head and heart, and victims to pride, deceit, or ingratitude? A comparison of their figures will solve this question. We shall find them possessing a degree of constitutional strength, a frame of body, a nervous system, with a set of features and complexion corresponding with the greater and lesser vigour of mind displayed on those occasions, under the vicissitudes of fortune; or the primitive, permanent, and Physiographical stamp on each of them will be found to tally with the respective de-

such comparisons as we recommend to be made, in various ranks and situations of life, in order to attain what we may justly call a quick sixth sense of comprehending with half an eye the secret sign peculiar to each station, trade, country, taste, religion, wit, raillery, comedy and tragedy, in every real scene that we witness on this stage of life.

In studying a visage, painted or engraven, when its proper title is found, the contour of the head should be copied exactly, at least on a rapid sketch; but if a striking object could not be penetrated by a superficial look, a negative quality would furnish an index, by comparing it with other classes, until either a resemblance or its peculiar originality was ascertained.

The more difficulty there was in discovering any class to which such a new face belonged or resembled, so much the greater right would the student have to call it an original that promised him fresh discoveries. Nature has formed mankind in the same perfect mould, without deviating from her just proportions any more than a straight line,

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degrees exhibited of sensibility. The respectable and censorious part of the community ought, therefore, to be on their guard in judging their neighbours by mere appearances, without attributing to insensibility or improper assurance the bold looks of a man, who, under a cloud, dares to read the faces of his superiors in riches,—his equals only in honest pride and integrity.

notwith-

notwithstanding an infinite variety of forms and complexions. Thus every individual whose figure differed, upon the whole, from that general standard, would be a monster, unless such a difference proceeded from accident. On the other hand, according as a human figure is found proportioned to Nature's rule, so must we call it perfect in the same degree.

A deformed outside may cover the strongest faculties,—just as Genius and Virtue are often concealed in a mean cottage; yet, since there are houses unfit to receive human creatures, we likewise find such forms as are not calculated for the reception of shining talents and noble sentiments.

Consequently we ought studiously to enquire into what kind of temporary dwelling is best adapted to superior beings on earth, while we view with pity the inferior rank of other disproportioned frames, which still admit the greatest powers of the mind and goodness of heart, to be displayed with so much the greater energy from the confined accommodation given to these qualities.

When a leading feature of the face is expressive, the companion to it will be found equally significant; for both are formed agreeable to the same wise system.

There is nothing without a cause, or all things must be attributed to general causes.

L 3

Whoever

Whoever doubts this principle need give himself no further pains to learn Physiology.

The handsomest face is liable to be injured, and the ugliest will admit of embellishments; while neither loses by these changes that primitive stamp by which it was first distinguished.

While a promising youth studies those variations, for the better or worse, let him connect the idea of a good action with an ugly countenance, and conceive beauty spoiled by vice.

The most expressive traits indicate strong faculties; but the want of such outward signs afford no proofs of weakness.

Whenever a very disproportioned visage comes in our way, we should peruse every line in it carefully, especially if we could match it with another of an opposite description, so as to furnish at once the two extremes of perfection and deformity, which would be a pleasing sight to a curious Physiognomist, who might then trust to the first impressions that they made on his mind, rather than to his own observations on so ill-matched a couple; yet, whatever he felt on seeing them together, and reading over the lesson that such contrasted traits presented, it would be incumbent on him to trace his emotions to their pure source at the same time; that, by drawing every feature, form, and mien, he might appeal to several judges, from his own self-evidence or conscious knowledge of Nature's language,

guage, expressed in too plain terms to be misunderstood or called otherwise than inspiration.

In this study there is no remark too trifling to be made upon the difference of stature, and other distinctions of the human race, peculiar to various countries and classes. Nor must the voice pass unnoticed; for, as the Italians mention it in their description of a person in passports, so ought we to distinguish a sweet or harsh sound, in order to discover what particular voices are suited to particular heads, dispositions, and characters.

Every Physiognomy has its own peculiar expression, in addition to general characteristic signs:—for instance; all thinkers have not such sedate countenances as clearly announce serious reflection, except by knitting their brows; nor even is benevolence expressed by some people otherwise than by a smile, or a grin, while they mark displeasure only by triangular lines in the cheeks, &c.

But, in attending to appearances of satisfaction or discontent, we should distinguish between natural and forced, or accidental distortions.

Accidents have been represented as forming an insurmountable bar to the study of Physiography; but surely a child knows natural marks from others,—as in the small-pox, a disorder that spoils some fair faces, without injuring the form.

Indeed, in some cases, a fall has been attended with mental derangement, but no striking deformity;

L 4

yet

yet the consequent state of mind was visible in the countenance, and some change in the body.

On many occasions a man may be known by one expressive characteristic sign at least; his leading features are sufficiently plain to denote his ruling passion; for often the forehead, nose, lips, and eyes alone, or well-assorted with other traits, express either solidity or inconsistency, vivacity or coldness, sagacity or stupidity, love or hatred.

But, as we have before observed, every trial of skill in penetrating a man's character ought to be attended with continual examinations of the most diminutive parts of his Physiognomy, which must be separately compared with the whole and corresponding appendages, or the most minute expressions of mother Nature.

In learning early to distinguish candour from duplicity, a good pupil will be soon enabled to see through those faces which, like wax, admit every fresh impression; and since they are so soft and pliable, it must be less difficult for him to foretell the changes incident to them according to circumstances. In the mean time, he will say to himself,—That face was formed to wear perpetual smiles; and another does not fit such a man, as, from his infancy, has sucked the milk of human kindness.

To this it might be said,—The most quiet man living is sometimes subject to fits of passion, like  
another

another who is continually violent: thus the same Physiognomy may express, by turns, both anger and good-nature. But it must be likewise admitted, that there are features on which the stamp of these opposite tempers are too deeply impressed to be effaced by transient impressions.

In this case, the Physiognomist will discern every kind of natural distinction, far different from those eruptions of a moment which leave no trace behind; for whatever change, for the better or worse, may originate from the manner of thinking, habit, and good or evil communication, a man's soul is to be seen through the veil, without the polish or brutality received in society.

It is from a perfect harmony between the leading features that conclusions are to be drawn without risk. If from the form of a mouth, or the sound of a voice, we cannot foretell exactly what a poet born is going to say, it will not be difficult to form a just conjecture respecting what he would be capable of expressing under supposed circumstances.

With a view to discoveries, every interesting situation must be closely observed,—such as an unforeseen meeting, and first appearance of a stranger, or his departure from any circle.

We should likewise seize those moments for studying faces, when passion is on the point of breaking out into violence, then restrained, and at last suppressed, by the presence and influence of a respectable

spectable personage. In such a scene, the united effects of dissimulation would be seen mingled with the parting traces of indignation.

In other cases, a simple motion proceeding from tenderness, grief or rage, zeal or envy, will suffice to exhibit an unknown character in a true light; nay, we need only set a perfect calm in opposition to the storm of passions, in order to judge what any individual is or is not, and may or may not become at a future period of his life, by comparing him, at his ease with himself, ruffled by strong agitations of mind.

In the course of our Physiographical studies, should we casually meet with a person who possessed the rare gift of listening with a tender concern to another's story, from beginning to end, before speaking a word, we ought, surely, to read every line of his countenance with that interest which he inspired; at the same time that we admired his easy manner of answering with dignity, but without assuming any imperious airs of superiority.

Certainly attention is a sign that denotes not only goodness of heart, and a degree of judgment, but likewise a great and steady mind; for he who cannot bear patiently to hear others speak first, has no pretensions to true merit; but a man who remains silent till a fit opportunity offers for him to

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deliver

deliver his sentiments deliberately, may expect success from his boldest enterprise.

A punctual plain dealer in business is no less deserving of our notice, while he attends assiduously to one thing at a time. Every motion indicates his solid turn; nor is there any fear of misleading the rising youth, if we declare that circumspection, in the smallest affairs, is a sure sign of the same prudence in matters of the greatest consequence.

If the following traits corresponded with each other in one face, they would form a model of perfection:—

The forehead, nose, and chin ought to be in a just relative proportion.

The front, or upper story, of this noble structure, should be fixed upon a base almost even on an horizontal line, with close, full, and straightish eyebrows.

We might prefer either sky-blue, or such darkish eyes as appear black at a short distance, with well-proportioned eye-lids, covering only the fourth or fifth part of the ball.

A prominent becoming nose should be placed on what is called a large bridge, equal on the sides, with a slight bent.

A mouth, elegantly slit, should have the upper lip sloping downwards to match the lower one, of equal breadth, adjoining to a round-peaked chin. Another principal ornament to such a head would be,

be, short auburn or chestnut hair, growing out into large flowing and natural ringlets.

Such a visage, with eyes shut, ought to be studied in five different ways;—in profile, a full face in front, three-fourths, seven-eighths, and, lastly, in a perpendicular attitude from the crown downwards in a direct line.

When the whole Physiognomy is presented to the observer at one full view, it distracts his attention by too many objects, which are best examined successively on both sides.

A knowledge of drawing is absolutely necessary for the art of reading and copying faces; but whether a learner copies from Nature, statues, paintings, or engravings, he ought to confine himself to take sketches, or outlines, in a manner adequate to the purpose of distinguishing, abstracting, simplifying, and explaining confused or intricate features.

Those fine drawings, the celebrated Passions of Le Brun, afford sufficient proofs of the necessity and utility of this sister art as a companion to painting, and a guide to Physiography, although it has been neglected, as much as *Lavater's* science, by several professors.

But, while the study of paintings in oil may be safely recommended to the young Physiognomist, we cannot too seriously warn him against the abuse of designs drawn with black-lead pencil, and miniatures,

niatures, because they lead to that loose and incorrect method, which, instead of pictures, produces mere caricatures of Nature. Red lead and Indian ink would form more standing colours for sketching profiles, in a pretty dark apartment, with a small light received from a hole of one foot diameter above the head to be drawn, and placed sideways.

A sky-light, falling perpendicular, might answer better for flat or delicate visages, but not for those with such strong muscles as would baffle the impression of a shadow in that way.

A *camera obscura* might be adapted to the other method pointed out, by which the object would be diminished three-fourths of its size; and if the design could not be so compleated, on account of the motion, it would serve to produce a just sketch of the outlines.

ESSAY

## ESSAY XVII.

*On the Use of Paintings, Portraits, &c.; with a short Account of the best Painters and Professors of Physiognomy.*

HISTORICAL paintings and portraits of the first masters cannot be too diligently studied.

The great defect in this profession, has been the flighting of those trivial peculiarities which distinguish every individual, as much as his shape or complexion. Consequently the Physiognomer must not be considered as a servile copyist, if he hides no flaw, nor passes over the least speck that indicates a deviation from the paths of Virtue;—such as the inhabitants of great towns quickly discover, from their habits of viewing and comparing the frail part of the fair creation with modest matrons.

Titian is a model for the most excellent copies of blooming beauties. His Venus, in the Grand Duke's Gallery at Florence, is flesh and blood.

Michael Angelo's designs contain the justest expressions of imperial power, easy dignity, presumptuous consequence, proud disdain, and undaunted courage.

Rubens

Rubens excelled in representing fury, drunkenness, and other excesses. He and Van Dyke have left us master-pieces in the highest style.

Raphael painted, in a still more majestic manner, both divine and noble figures, with thought, image, and sentiment inimitable.—Guido's heads are lovely, correct, and noble.

Salvator Rosa needs only to be named in the first rank of Italian painters.

Pouffin, Le Sueur, and Le Brun, did honour to France. Others, from Kneller to Reynolds, gained fame and riches in England.

Teniers still stands foremost in repute, for having represented national humour, innocent sports, and gambols. The Flemish school, likewise, produced Gerard Dow, who drew rogues as they are, and true pictures of low life.

Holbein excelled them in expressing candour and simplicity. Hogarth followed him in the same line with equal or greater success. His *Harlot's Progress*, and *March of the Guards*, prove him to have been a Physiognomist, who did not omit a single trait that expressed vulgarity, ridicule, and the horrors of dissipation.

For harmony, composure, and serenity, Mengs, his wife, and children, will be remembered so long as their pictures, drawn by him for celestial beings, exist as ornaments to the Vatican.

West

West seems to be endowed with the same pacific genius as distinguishes that religious society of which he is so eminent a member.

Callot, Bath, Golthius, De Vos, Leyde, Brandt, Scullenberg, La Fage, and Rembrandt, were excellent painters of droll, comic, and convivial scenes.

For tender mothers, fine children, and attentive servants, we refer the student to Chodowiecke's works, containing a representation of those fashionable airs and gestures which prevail in courts, camps, and cities.

Fuseli paints giants, and every gigantic object, in a manner that preserves his name from oblivion.

Superior to many, inferior to none, Annibal Carracci excelled in the same way, particularly in representing mirth and jollity\*.

To Physiognomists we recommend the portraits of Morin, with the modest suffering countenances drawn by Laireffe. Wilkenboon should be consulted for the just traits of irony; and Spranger for expressions of rage.

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\* Jenkins, of Rome, took up the pallet in his younger years with a degree of reputation that paved the way to eminence in another career. His portraits are scarce; but should his collections of every kind be preserved, they would form a valuable inheritance, wherever the fate of war might decide, without impoverishing his amiable niece, or nearest relatives; because, happily for them, he acted, as a banker, upon this wise principle,—that the walls of Temple Bar were

It would be superfluous to dwell on the advantages to be derived from the study of such invaluable master-pieces as are known to every eminent artist that has seen a little of the world. Let it suffice to add, what an ingenious student will feel as he proceeds, that there is no walk in life wherein a penetrating eye may not see through the mask that education or hypocrisy throws over a *countenance* and *character*, when both are duly compared, with a distinction betwixt the original face and acquired appearance: thus he may learn to judge how much outward signs correspond with secret inclinations. At first sight, he will know such a man as is degraded by imprudence or excesses, not only in his own estimation, but in the opinion of his neighbours, whose eyes he constantly avoids.

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were the safest rampart that the *Childs* could throw around his well-earned fortune. He is now no more, having died at Harwich, on landing with a part of the treasures brought from the Roman Museums. While he lived,—as the needle points to the North, so did his British heart point towards his native home, after an absence from it of half a century. A surviving friend and correspondent pays this tribute due to his memory with the tear of sensibility.

Poor Jacob More's departed spirit has a claim to equal homage from the same friendly pen, although his genius was of a different cast. His style of painting was generally confined to ruins, landscapes, and the grandest scenes: his Eruptions of Vesuvius, drawn on the spot, will have a place in the best cabinets of Europe, so long as burning mountains shall leave a trace behind.

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But should he meet with visages impressed with marks of past lives, or sensations unknown to him, a reference to his models at home would soon enable him to unravel the mystery, by a comparison with some of Le Brun's, or other profiles in his collection. However that may be, it is incumbent on the Physiognomist to pronounce his judgment upon any one's good name and private conduct, only from proofs, and with great caution.

The number of good writers on this subject is inconsiderable: a fortnight would suffice for the perusal of all their works, which deserve praise or comment.

Porta has collected the most essential observations of ancient authors, but not with a due distinction between truth and visionary notions. His reflections, however, are interesting, and explained by the faces of celebrated characters.

Peuschel and Perneti followed Porta's example, without determining precisely the features of a face distinguished from casual appearances. This discrimination is so necessary, that, without it, we might justly apply to Physiography what Pope has said—

“ A little learning is a dangerous thing.”

Helvetius, in his *Physiognomia Medicinalis*, has treated different constitutions with great propriety; and, notwithstanding his partiality for astrology, he  
is

is entitled to the first place among the professors of Physiology.

Huart's work, with all his undigested ideas, is worth reading; for, if he makes no fresh discoveries, several excellent passages, taken from Aristotle, Galen, and Hippocrates, are produced by him in support of his curious remarks.

Philip May gave few instructions.

But La Chambre was a judicious writer, who succeeded in describing passionate characters so well, that, while reading his descriptions, we cannot help regretting the omission of proper engravings.

Jean de Hagen's portrait in the frontispiece of his Treatise makes an impression. We need say no more, than that both are worth a glance, especially as he has copied from other masters.

Marbitius attempted to found a new system for the arrangement of human features, which, absurd as it appears, has been adopted by a modern writer. His Essay is entitled, *De Varietate Faciei Humanæ*; and printed at Dresden in 1675.

Parsons is a classic author, whose works Buffon and Haller took the trouble to abridge; for, notwithstanding any imperfections, nobody has excelled him in treating the moveable traits,—the muscles of the face, and language of the passions.

Jacob Bohme, an obscure Deist, was a close observer of Nature, whose expressions were familiar to him; and he knew how to sift into the meaning

of every minute distinguishing trait. His Essay on the Four Kinds of Complexion is a jewel in the eyes of a good Physiognomist.

Guglielmo Gratarole, a Physician of Bergamo, likewise transmitted his name with honour to posterity, in a book whose title is, *De Predictione Morum Naturarumque Hominum*, &c.

Scipio Claramontius, likewise, wrote with ease and elegance, as a man who had probed the inmost recesses of the heart, and studied the mental faculties, in a manner that proved his informations derived from the purest sources. Some errors of his predecessors have, however, crept into his valuable Treatise, *De Conjectandis cujusque Moribus & Latitantibus Animi Affectibus*, which deserves to be perfectly understood by every one who studies the useful art of reading human faces; but, with all his scholastic reasoning, we must give him credit for new original ideas, and judicious remarks, written in a style that exhibits a noble and liberal way of thinking.

The comparison of great men with their lives and pictures, as they strike us in history, or act their parts before us, would afford a perpetual fund of knowledge and entertainment, adapted to a salutary end. But the best school, and where the young Physiognomist ought to finish his studies, is the society of honest men, whose virtues and perfections  
he

he would find out, by searching with friendly eyes and a pure heart.

Let him, then, shew a cool indifference for the idle questions of busy-bodies, who appeal to his opinion with no better view than to render him an object of ridicule. His skill will not be diminished by reserve; nor ought any student to give himself up to these pursuits, without feeling this self-persuasion,—that he is endowed with the qualities required for such a science. In this case, he would anticipate the pleasure of discovering wonders, as a sufficient recompense for the troublesome but delightful task of reading the book of Nature, and studying the features of all living creatures, from man to plants.

## ESSAY XVIII.

*On the Features of Animals.*

BRUTES differ from each other in character and disposition, as much as they do in stature and the construction of their bones.

Every species has a peculiar set of features that distinguishes them all,—from the imperial eagle down to the weakest insect, or from the creeping worm up to the formidable lion and gigantic elephant.

At the first sight of these creatures, or on seeing the lamb, the serpent, and butterfly, without the least knowledge of their names and power, would a child be at a loss to attribute to them their respective degrees of strength and courage?

Among animals, that class is the weakest, and least capable of receiving ideas, which differs the most from mankind in their outward form. This assertion may be proved by a glance at the various classes; or even a comparison of their figures, in idea, suffices for a demonstration.

Through the whole range of animal creation not a single brute is to be found, that is not quite different from man in exterior appearance and inward

structure; for every kind has received from the Supreme designer a set of invariable lines, as we shall hereafter demonstrate, after observing, that it would have been an operation becoming such enlightened men as Buffon, Linnæus, Camper, and Euler, to have ascertained the forms of heads by a regular standard fixed on mathematical principles.

For instance; the striking distinction in a man's face from all others, is the regular proportion of the fore-part, which forms a perfect oval, whose parts, being regularly divided, are preserved in equal symmetry.

It is in that respect that brutes are infinitely inferior to us, although they resemble in the hind part of the skull.

Thus in passing a line from the root of the teeth of the upper jaw, through the most forward bone of the forehead, to cross another horizontal line on the whole cheek, from the root of the nose to the lower end or orifice of the ear, these two lines united would form an angle of about eighty to ninety degrees.

From the baboon downwards on the scale of beings, all animals differ from that form more or less; and their instinct appears to be so much the more limited, according as the union of those two lines forms in them a more pointed angle.

Consequently, as mother Nature seems to have fixed a visible connection between exterior forms

and extent of faculties, it is easy for a naturalist to judge of any animal's degree of reason, or instinct, from the form of the bones in his head. Accordingly fishes, who are the flattest living creatures, have faces, which present a more pointed angle by the junction of two such cross lines.

The human face furnishes the form of an egg, rather wider above than below. If we divide this oval figure into two diameters, the largest will split into two equal parts the forehead, nose, mouth, and chin; the smallest will likewise divide the head into two portions, alike at the root of the eye-brows. These parts being again divided, will produce, in regular portions as before, one the root of the hair, and the other the tip of the nose.

The fourth division, by being divided into three parts, will contain the mouth and source of the chin.

The base of the nose, with its tip, forms a triangle of equal sides, of the size of the mouth or eye.

Between both eyes there is sufficient space for a third, or a nose. The nose and forehead should be separated only by a slight and almost imperceptible bent.

Monkeys come nearest to the human figure: the ouran-outang bears the strongest resemblance to man; but the supposed likeness will not appear well-founded; nor can this wild creature's pretensions stand the test

test of examination ; for his natural brutality breaks out under the mask that Nature gave him to conceal his inferior rank.

His real character is known by his narrow forehead, so different from a man's, as well as from the want of white in his eyes ; or, at least, it is imperceptible.

He is likewise distinguished by the near approach of his eyes, or sockets ; and this proximity is more striking when the skull-bones are stripped of their flesh and muscles.

His nose is excessively flat, too small above, and crushed down below. While a man's ears are placed on a level with the nose and eye-brows, the monkey has the same parts nearer the crown of his head. The space between his nose and mouth is almost the whole length of his chin ; but in a human being it is generally but half so long.

His lips are fastened to his teeth, forming the key of an arch, as in other brutes.

It is unnecessary to push this comparison any further ; but it must be granted, that this animal has a serious gait, and a melancholy look. He is good-natured and thoughtful, having neither the impatience of a baboon, nor does he play the mischievous tricks of other apes.

After the man of the wood, the gibbon is the next resembling the human being in some degrees, particularly in the skull ; but notwithstanding his  
mild

mild disposition and gentle manners, his figure, upon the whole, is materially different from our's; for, even as he stands, his disproportioned arms reach the ground, while the brute appears, either by the wide distance between his mouth and nose, or by the nearness of these two parts, without any symmetry of features.

Some of these brutes, however, are not so ugly as they generally appear; nor would it be proper to disgust our readers with their particular description; but, passing over various kinds who inhabit the coast of Africa, we must mention the Chinese bonnets, or monkeys, who can only be half tamed; yet they catch crabs or lobsters very dexterously, by entangling their tails with the claws of shell-fish.

In the class of four-footed animals, the horse is most eminently distinguished for his beautiful figure, courage, strength, docility, and use to mankind: he unites with a regular shape both elegance and just proportion in all parts of his body. Who better than the Sacred Writer\* could describe this noble animal, the friend and companion of man?

Compared

### THE HORSE.

\* Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper?

The

Compared with other brutes, he rises far superior to most of them in the scale of creation. What  
an

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The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength. He goeth on to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he back from the sword. The quiver rattleth against him; the glittering spear and the shield. He swalloweth the ground with fierceness and rage; neither believeth he that it is the sound of the trumpet. He saith among the trumpets—Ha, ha!—and he smelleth the battle afar off; the thunder of the captains, and the shouting!

Here, then, are the most sprightly images of this generous beast expressed in such energetic language as would have furnished models of the sublime to those ancient writers who were unacquainted with the book of Job. Thus the sacred Poet makes all the beauties to flow from an inward principle in the creature that he describes; but the best classic poets have confined their following descriptions of him to his outward figure, lineaments, and motions.—In Homer's *Iliad* there is this beautiful simile, to which an English Bard has done justice:—

Freed from his keepers, thus, with broken reins,  
The wanton courser prances o'er the plains;  
Or in the pride of youth o'erleaps the mounds,  
And snuffs the females in forbidden grounds;  
Or seeks his watering in the well-known flood,  
To quench his thirst, and cool his fiery blood.  
He swims luxuriant in the liquid plain,  
And o'er his shoulders flows his waving mane;  
He neighs, he snorts, he bears his head on high,  
Before his ample chest the frothy waters fly.

Virgil's

an air of dignity there is in his head and neck!—  
But the rhinoceros and elephant are clumsy and  
unwieldy ;

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Virgil's description has been thus translated :—

The fiery courser, when he hears from far  
The sprightly trumpets, and the shouts of war,  
Pricks up his ears, and, trembling with delight,  
Shifts pace, and paws, and hopes the promis'd fight.  
On his right shoulder his thick mane reclin'd,  
Ruffles at speed, and dances in the wind.  
His horny hoofs are jetty black, and round ;  
His chin is double ;—starting with a bound  
He turns the turf, and shakes the solid ground.  
Fire from his eyes, clouds from his nostrils flow ;  
He bears his rider headlong on the foe ;  
And in his nostrils rolls collected fire.——

Lucan expresses the circumstance of shouting with great spirit :—

So when the ring with joyful shouts rebounds,  
With rage and pride th' imprison'd courser bounds :  
He frets, he foams, he rends his idle rein,  
Springs o'er the fence, and headlong seeks the plain.

Pope, in his *Windfor Forest*, has seized the true sublimity of the  
ancients, thus :—

Th' impatient courser pants in every vein,  
And, pawing, seems to beat the distant plain ;  
Hills, vales, and floods, appear already cross'd,  
And, ere he starts, a thousand steps are lost.

However familiar these extracts may be to some readers, it is to  
be hoped that they will admit them as better than any vain at-  
tempt

unwieldy; the camel is deformed; the lion thick-headed; the afs ill-shaped; and the ox short-footed.

A horse's tail ought to be long, waving, and proportioned to his size. A right medium guards him against those inconveniences to which every rider is no stranger.

His head ought to be dry and slim, without being too long; his ears, not distant from each other, small, straight, fixed, slender, and placed high on his head. The forehead should be narrow, and a little convex, or rising in a circular form like the outside of a globe; with plump cheeks, thin eyelids, clear, lively, and sparkling eyes, pretty large, and even with his head, with a large ball or apple of the eye: his nether jaw lean and slim; the nose a little bent; a thin partition; open and well-cloven nostrils; delicate lips, with a middling slit; high and sharp withers; dry, flat, and pretty broad shoulders; his back smooth, but sloping insensibly lengthways, and rising on both sides of the spine or back-bone, which ought to appear as if it were driven into his body.

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tempt to convey the same ideas in a modern stile, adapted to the more refined or corrupted taste of the times: nay, had Dr. Sue been conversant with Pope's writings, he likewise would have quoted and admired the preceding sublime lines on this noble animal, the favourite friend of man.

His

His flanks should be full and short, the buttocks round and plump; the haunch well-garnished; the stump of his tail thick and strong; his legs and gascoins large and fleshy; knees round in the fore-part; wide ham; the bit small forward, and large on the sides; slender joints at the shin; loose sinews; thin fetlock; large and longish pastern; his coronet a little raised; hoofs high, with black, smooth, and shining horn; the hind-part round, with large and pretty high sides; the frush thin and lean, with thick and hollow soles.

The horse's mane is suited to his head, adorns his neck, and gives him a stately look; while his bushy and trailing tail sets off to advantage the hind parts of his body. This ornament consists of thick and long hair, which seems to grow out of his back, because the rump, where it originates, is very short; and although he cannot raise it, as the lion does, it is no less useful to him, since he can use it sideways to keep off troublesome flies.

The greatest conquest ever made by man, was in forcing this high-mettled animal to share with him the toils and glories of war, the sports of the chase, the race, or the tournament. Brave as his master, he flies in the face of danger, takes delight in the din of arms, and, like a gallant soldier, he advances or retreats at the word of command, having no other will of his own than to discharge his duty, subject to military discipline: nay, after  
having

having strained every nerve in executing orders with equal docility and exactness, he takes pride in anticipating the pleasure of his superior, and even rejoices to meet a glorious death in the field.

In short, Nature has inspired the horse with love and fear of man, together with a due sense of his dependence, and want of our protection.

The dog is another domestic animal, equally attached to the human species.

He surpasses others in his high, but disproportioned, forehead, for the advantage of that feature is lost by other deformities; particularly the brutish shape of his snout, adapted to the strong sense of smelling; and accompanied with fallen chaps, or rather no chin at all.—Buffon's opinion is, that a dog's dangling ears are characteristic signs of his slavery.

The hare and rabbit have every appearance of that excessive lechery, and low gluttony, by which they are distinguished.—What a contrast there is between their shape, and a man's regular side-face and majestic figure!

The goat\* appears to be, in some measure, a caricature of the sheep; an emblem of avarice, and, in every respect, a mean, if not a despicable brute.

Who

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\* Dr. Sue's description of the goat is, —“ La chevre paroît être en quelque sorte une caricature de la brebis : on croit y voir l'em-  
bleme

Who can look at the hog without perceiving all the signs of meanness from his ears to the tip of his snout, with a treacherous eye, and a mischievous grunt?

The mouth of an ass retraces every idea of stupidity and stubbornness; his heavy and slovenly head is the type of his character.

The camel and dromedary rank as if they were a composition of the horse, sheep, ass, and monkey, without having inherited their noblest features. Differing from other useful animals, they have no mouths calculated for the bridle; nor is the spot where they can bear it marked with any sign of spirit and mettle. Their other features are equally mean, and expressive of their servility.

bleme de l'avarice : un caractere de bassesse semble percer au travers de l'ensemble, & de chaque partie considerée separement."

It is true, that the goat appears to be, in some measure, a caricature of the sheep. Poor, and ill-fed, he bears the stamp of avarice, with something of that beggarly poverty which prevails in those highlands where he is best known; but when the female has fared sumptuously in the valley, she looks as plump as an English matron. Indeed, all mountaineers profess the greatest respect for this animal, whose milk they drink from their infancy. In their partial eyes, his whitish beard resembles those gray hairs which formerly distinguished the Druids and elders of the land. Even that misery, which a high-bred naturalist may despise, shews the spirit of independence peculiar to Wales, where he still browses like St. David's son, an Ancient Briton, who prefers the humble fare of his native rocks, to all the luxuries of England without his liberty.

The

The bear's looks announce his ferocity and destructive power. Fond of deserts, he avoids the busy walks of men.

The boar is equally remarkable as a wild beast, whose coarse aspect announces his vile and voracious disposition. The hedge-hog, likewise, bears the stamp of his character for distrust, malice, and gluttony.

The lion's profile is suited to his high rank as the king of animals. His majesty appears in a striking manner, when we observe the contour of his forehead, with a straightish angle which the outline exhibits from his most prominent feature down to the lower jaw. His other traits are equally expressive of power and dignity.

A man who resembled this animal in the face would certainly pass for an extraordinary character; but we doubt that such a perfect likeness will ever be found.

Treachery and blood-thirsty rage are stamped in legible characters on the tiger's eyes and muzzle.

Cats are tamed tigers, of a smaller size; weaker, but no better natured, except so far as their manners are polished. Thus they surpass the largest species in refined cruelty towards birds and mice, by taking pleasure to prolong the sufferings of their victims.

The buffalo's frightful figure indicates his brutal inclinations to strike and throw down whatever comes in his way.

N

The

The head of an ox has every line that marks his stupidity, patience, and obstinacy; particularly the distance of his eyes, awry, as they are, in this direction ; with the crooked traits of his muzzle.

The bull appears to possess a greater spirit, a livelier eye, and a higher brow.

The stag in his prime of life, and the roe, are both on the scent and listening, with every sign of swiftness, circumspection, and peaceful innocence. There is in the corner of their eyes a sharp point that indicates a quick sense of hearing, and watchful ears.

The wild goat has prodigious strength in his nerves to bear, as he does, an enormous weight of horns. There is, however, a degree of delicacy in the corner of his eyes, consistent with his timid and respectable appearance, in comparison with more ferocious brutes.

For instance; is not the wolf easily known in his true light, from his formidable teeth, furious, treacherous, staring, and sanguinary look?

Nor can we be mistaken in attributing to the fox that low cunning, weakness, and rapacity, which his countenance expresses.

The weasel's form indicates his art and agility.

We

We need only view the lynx for a moment, at the crooked line  in his muzzle, and the ruffled brows, added to the swiftness of his motions, in order to be convinced of his cruel designs.

The beaver possesses less courage than ingenuity: he is armed with teeth fitter to gnaw than devour.

The powerful elephant is of an overbearing character; such as agrees with his gigantic figure.— Well-turned and hollow bones mark his sagacity. His *embonpoint* is proportioned to that luxurious style of living, of which he is so fond. The supple trunk discovers prudence and craftiness; while the length and compass of his brow are signs of that retentive memory for which he is distinguished.

Were it not for the striking situation of his forehead, with respect to his eyes and mouth, we might discover a greater resemblance of a human being than is visible in any other creature. But it is a man's brow alone that always forms a right angle, more or less regular, with the axis of the eye, and line of the mouth. In short, every glance of an elephant's eye proclaims his superior abilities.

The bat expresses in all his diminutive body a vile and violent passion, that he dares not indulge in the face of day; nor are his hidden eyes adapted to light. His form indicates agility; while the tail, adjoining to his wings, is the type of his mischievous disposition.

## ESSAY XIX.

*On Birds.*

NATURE has likewise drawn on birds a true picture of their different characters, according to their species and place in the scale of beings.

Were we only to consider their tender constitution, delicate form, and superior faculties, confined within a narrow compass, in a comparative view with other living creatures, it might be justly said, that, next to man, the feathered race is best entitled to our admiration.

Their little bodies contain more strength than has fallen to the lot of the most formidable four-footed animals, with a greater degree of nimbleness, by means of wings, which are marks of their independence. Thus, having the power to visit all parts of the world, they fly from one climate to another, according to those changes which instinct teaches them to foresee; so that the whole universe is their country, or wherever they can soar under the great canopy of Heaven.

They are of a lighter form than quadrupeds, having a more pliant neck, and a smaller head, with a pointed beak, instead of a mouth. To them be-

longs an almost despotic power over the inhabitants of three elements,—the air, earth, and water; together with an exclusive right to rule over the whole tribe of insects, who seem to have been created for no other purpose than to nourish their voracious masters.

Nor do they fear the poison of reptiles; while fish at sea, and four-footed beasts on land, become alternately the devoted prey for fowls of the air.

A hawk attacks the fox; the falcon seizes the antelope; the griffin devours a wild goat.

Superior to them all, the imperial eagle takes a bolder flight, defying the rays of the sun, looking with his piercing eyes over extensive dominions, and discovering at a distance in a retired spot, on the wing, or perched upon a tree, the feeble animal that is doomed to satisfy his craving appetite.

Suddenly the proud tyrant pounces on his prey, grasps it in his claws, and carries it in triumph either to a solitary rock or a deserted village, where he soon enjoys a delicious repast.

Is it, then, possible for us to consider that king of birds, without feeling how much his form and features correspond with his majestic authority? Is not his sparkling eye like lightning? Who else but he dares soar so high to view the brilliant star of day?

What other sight, like his, from the mole upwards, is formed to survey at once the firmament,

and the whole range of creation? Indeed, not only that commanding feature, but every other, announces his power to dart the wrath of Heaven on every creature that falls within his arbitrary gripe.

Inferior to him, the vulture may boast of a more supple neck and bill, with a graceful mien.

The owl is likewise a voracious bird of the lowest class, equally weak and timorous.

The English fighting cock has a beak proportioned to his weakness; but, notwithstanding his pride, presumption, and jealousy, he is inferior to birds of his size, and probably more amorous.

The parrot prates and assumes consequence with no better pretensions than his speech and feathers.

But the pigeon is a just emblem of peace, modesty, and timidity.

Neither the dove's good-nature, nor the wild duck's revengeful look, is visible in the pelican's small head, and long bill, by which he is, in some measure, deformed, or, at least, has an unmeaning appearance.

The swan looks nobler than a goose, is weaker than the eagle, less tender-hearted than the dove, and more graceful than the ostrich.

The wild duck has a fiercer air than the swan; but however big he may be, compared to an eagle, his strength is not in proportion to his size.

As

As the ostrich is said to grind glass, and digest iron, he was not formed to feel compassion; yet the cross lines in his face express more tenderness than the straight and pointed *traits*. For the same reason, the long line, that divides the close beak of this bird, indicates clearly the hardness of his heart, in such a manner as forms a contrast between him and a man in that particular feature.

But, upon the whole, and generally speaking, if we consider all the advantages that birds enjoy over every species of animals on earth, they will be found entitled to the next place, for pre-eminence, after mankind; particularly from their undisputed perfections,—such as a stately gait, upright walk on two feet, imitation of musical sounds, wedded love, motherly affection, and social virtues, added to the invaluable gift of flying to an immense distance, much sooner than the swiftest four-footed animal could perform a shorter race on his more solid element.

Nor has Art been able to copy, much less excel, Nature's choicest colours lavished with profusion upon the plumages of those little amiable creatures, who daily display such a splendid show as surpasses the pomp of dress at court, or a coronation, and in a style that beggars all description; nay, were their lives to be traced from the nest up to the summit of domestic happiness, there would be a wide field open for instructive contemplation, with a pleasant

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subject

subject for a most interesting history. But we must wave it, with so much the less regret, as students will find that this matter alone has already employed the pens of eminent writers in all ages and countries.

ESSAY

## ESSAY XX.

*On Fishes.*

IT is evident, that every Physiognomy bears a significant mark, expressing the degree of faculties assigned to each animal on the scale of creation.

For instance ; how widely different is a fish compared with man, the lion, and other creatures, particularly in profile, or his side-face ! His capacity is at the same proportionable distance from superior understanding ; for he has not sufficient sense to think, reflect, act, and contrive a way to escape from the net : he can neither shut nor cover those dull and globular eyes, which differ much from the same organ of sight in the fox and elephant,—two beasts remarkable for cunning, proportioned to their features.

Many fishes seem destitute of every quality necessary for living either in society or with any kind of communication with each other ; since, like tyrants, the great ones destroy the lower class for food, with a total indifference about the manner of devouring them, rather than indulging the taste while they satisfy their ravenous appetites : yet finny tribes of this description possess more than half

half the globe in brooks, rivers, lakes, and seas, in an incalculable number, and with an infinite variety of forms, powers, habits, and complexion.

But, much as this matter exceeds the comprehension of vulgar minds, it is still big with discoveries, expected from the united labours of enterprising men. In the mean time, it is sufficient to add, that every library contains valuable treatises on the numerous inhabitants of the ocean, and others who live at home for our support and pleasure.

ESSAY

## ESSAY XXI.

*On Amphibious Animals.*

THIS class of animals, partaking of two natures, is less numerous than the last ; but, since they are not so well known, it is our duty to mention some particulars respecting their existence. They are either naked, or covered with scales ; being called amphibious, not because they live alike on land or in water, but from the circumstance of their breathing at unequal intervals, and not regularly, as other creatures do. It is true, that they can exist for some time in the air, but not under water so long, without perishing. Their blood is not warmer than that intermediate space which they fill. Thus a touch of their cold bodies makes an unpleasant impression, added to the horror that they inspire by their offensive smell, supposed poison, and ghastly figures.

Some of them are four-footed,—such as the tortoise, the toad, the frog, theameleon, the salamander, the lizard, &c.

Others have no feet,—such are vipers, serpents, adders, &c. Tortoises are quiet, mild, and cool, being seemingly affected by no strong passions.

Spallanzani

Spallanzani having had the cruelty to behead the male while he was caressing his love, he continued, for some time, to hatch her eggs, and lived four-and-twenty hours after having suffered that fatal operation. Another of the same species, being deprived of his brains, has been known to retain all the signs of life for six months. After being separated from the body, his head undergoes no striking change for some hours, and his blood continues to circulate during twelve days, or longer. A frog's heart has been seen to pant a fortnight after the loss of his bowels. Free tortoises live upwards of a century, and twenty years before they come to their full growth.

The toad's body is greenish, and ill-shaped, with small pustules or swellings like biles, moistened with a kind of glue. This animal lives in the most unwholesome spots, taking delight to diminish the causes of infection. He stares at a man, and shoots on him his slimy venom, which, however, is not dangerous.

The frog is oblong, smooth, and hump-backed. His hoarse croak proceeds from bladders, fixed near his wind-pipe, which he fills and empties continually.

The crocodile is of a longish form, covered with scales, and adorned with a tail, being armed with a saw on his back, besides terrible teeth suited to his voracity. He cannot be attacked without risque;  
but,

but, luckily, some other creatures, by destroying his eggs, diminish the breed.

The *cameleon* is a singular creature, whose body is compact, and partly composed of shagreen, with large and sparkling eyes. He changes colour from sickness and vexation; but it is not true that he takes the complexion of surrounding objects, according to that vulgar opinion which has rendered him the emblem of flattery. He is found in Asia and Africa.

The *lizard* is a small, pretty, and amphibious animal, with a long and pointed tail, full of little scales; with a long body, like a cylinder, fixed to his head; and without a member fit for motion.

The *serpent* slides along the ground with such velocity as renders him almost invisible, till he has climbed on a tree, or leaped over a precipice, with equal rapidity. Instead of supporters on the lower part of their bodies, serpents have large moving blades, rising and falling by means of a particular muscle. Besides this lever, they have the power of bending the middle of their trunk into a bow, from which they shoot themselves out like an arrow, after having used their two waving sides as elastic springs, which spend their force in pushing them forward to an incredible distance.\*

Serpents

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\* What a lesson is here for the study and application of mechanic powers! Nature furnishes such a model as has not been excelled in the

Serpents have a very small, but most expressive face, stamped with all the traits of malice and imposture. Their wiles are beyond conception, notwithstanding their evident want of judgment, reflection, and memory.

Their variegated spots and colours impress us with a sufficient idea of deceit to put every man on his guard; and were we to rove through all the wilds of America, not one serpent would be found capable of inspiring with his looks either affection or confidence. Let us suppose such features as his in a human countenance;—we should turn from it with horror.

Sly people, indeed, have their eyes sunk deep in the sockets; but the serpent has his sight on a level with the head, as a mark of malicious designs: he resembles only that despicable description of men whose low cunning is a substitute for wisdom. Without any of that sprightliness which distinguishes other brutes in their enjoyments, serpents discover no marks of love and harmony, nor any turn for innocent recreation among themselves; but,

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the machine at Marly, for conveying the water of the Seine across a hilly ground to Versailles. Although that was once the wonder of a splendid age, yet so great are the improvements since made in this art, particularly in England, that were the iron-work in it delivered to Bolton and Watt, of Soho, they would probably undertake to make a better mill for the same purpose, without requiring any other compensation for their trouble.

in

in melancholy mood, they lie down on the brink of a pool, in hollow rocks, or under barren bushes. However, as every link in the chain of creation deserves notice, so, with all their imperfections, these animals excite a degree of interest in the mind of a naturalist, who sees with pleasure their admirable structure rendered useful to them upon the principles of mechanism.

ESSAY

## ESSAY XXII.

*On Insects.*

INSECTS form a world separate from other beings; and, far as they are removed from the human species, the Physiognomist will find them fit objects of meditation. This truth must instantly strike him—that the figure of every creature indicates its active and passive power, or in what degree it can enjoy or destroy, suffer or resist.

For instance; is it not clear, that an insect with hard and close wings appears much superior to the puny butterfly, who has not the same advantage? At the same time, does it not strike a superficial observer, that the softest substance must be the weakest, and, consequently, most liable to be destroyed?

Another remark will be made,—that the total want of brains renders these creeping creatures a direct contrast to man, who is so abundantly supplied with that necessary article.

Beside, is there not among their various classes a material difference consistent with their character?

The wasp discovers more spirit than the caterpillar, who crawls as if he had scarce a breath of life

life more than that dry branch of a tree which he resembles.

The butterfly's delight to suck at every flower corresponds with his tender frame, formed to enjoy the sweets of the garden, and perish with a blight like the rose. His pliant trunk marks his harmless weakness.

The bee revels in luxury, with a fixed plan of living, above the fly, who is free and easy, but without any fixed object of his desires.\*

Compared with butterflies, spiders are swifter, more alert in seizing, and more voracious in devouring the smaller brood.

But, above them all, the ant sets an example of foresight, courage, and perseverance, beyond any idea that we could conceive of this poor pismire from her weak appearance.

\* F. Hubert has lately published at Geneva some new and curious Observations on Bees.

This author, being born blind, but with a strong passion for science, succeeded in making improvements of hives, and such discoveries as had escaped the penetrating eyes of Reaumur, Bonnet, and Swammerdam; particularly concerning the queen's propagation; miscarriage of drones; the change of government during her majesty's retirement; the manner in which their worms spin silk from the cods; and other experiments, made by him in the course of his studies, assisted by a faithful servant, to whom he communicated the same turn of mind. —What a pity it is that so few men are disposed, or qualified, to follow these useful and laudable pursuits!

O

Covered

Covered with a coat of mail, and dressed in a strong suit of armour, the may-bug takes pride in displaying his power to do mischief and defend himself.

The gnat's grinders are adapted to his character for gnawing, and eating greedily, whatever comes in his way.

The grasshopper discovers the same ravenous appetite, by his open and menacing mouth.

The horn-beetle, or bull-fly, appears cruel and ferocious. Like him, there is a swarm of reptiles whose united features might serve to furnish a picture of the greatest wickedness, were it not unfortunately found in the faces of nobler creatures. True it is, however, that much as they vary in shape, colour, and inclinations, we find them all wisely formed by the Creative hand to answer the secret views of Providence.

## ESSAY XXIII.

*On Worms.*

AMONG all living creatures, worms are those whose description forms the most difficult task, on account of their incalculable number and infinite varieties, abounding in all parts of the universe, in every element, as well as in animals and vegetables, for the wisest purpose;—as if they were the principal agents employed by Nature to destroy, corrupt, or purify her glorious works.

They are generally divided into fix classes, described according to their respective forms and qualities, viz.—

1st. Microscopic worms, resembling vegetables,—such as the polypus, the proteus, and others which are not familiarly known to us, on account of the changes that they undergo; but they are all equally distinguished by one common trait,—their voracity in destroying whatever solid body comes within their reach, except their own species;—as if they had no other faculty than to digest, as they do, in their imperfect state of existence.

They possess the surprising power to reproduce themselves, not only from their eggs, but likewise

out of the divided parts of their bodies, whatever way the separation be made, lengthwise or crosswise, in a single or double division.

2dly. Intestine worms are easier to be distinguished, as their bodies are harder, longer, and more regular. They live in the bowels of animals, by sea and land. Being produced by eggs, they have also the same regenerating faculty as others for reviving out of their mutilated parts. Their Physiognomy inspires fear and melancholy; nay, the very thought of some grubs, like these, suffices to make unpleasant impressions. We shall not, therefore, extend this description at the risk of giving pain to delicate minds.

3dly. Glow-worms are hitherto very little known, except from the quality peculiar to them of favouring the benighted traveller with their dazzling light, particularly on the sea-shore, in different parts of the globe. We can only add, that these shining worms are of various kinds, differing much in their form and qualities.

4thly. This fourth class, called by the French *echinodermes*, is equally beyond human comprehension for describing it properly, so far as to form a right judgment of all its *traits*. We know that, like others, they reproduce themselves out of their separated members.

5thly. Testaceous worms are covered with shells, like the snail. They open a larger field for observation,

vation, as not only their heads, but other parts, are visible to the naked eye ; even growing muscles are to be seen in some of them, with a full growth of shells in spires, by which the grub's age may be ascertained : but men have generally admired more this worm's cabin than himself, on account of its gaudy colours, and beautiful structure. The admirers of Nature, after having done justice to his taste and ingenuity, will, however, indulge a train of thoughts about the method used by such a puny creature, to execute that master-piece of architecture in a style of elegance and inimitable perfection.

6thly. The zoophytes, or sea-polypuses, have been considered as vegetables for many ages ; but some naturalists now pronounce them to be the intermediate link in Nature's chain between the animal and vegetable worlds. Be that as it may, we lament that this branch of natural history has not been cultivated with such success, as to excite a stronger interest, that might tend equally to gratify curiosity, and produce useful discoveries.

## ESSAY XXIV.

*On Vegetables.*

A THINKING man cannot look about him without feeling curious to know the faces of all living creatures, particularly those who contribute most to his comfort and entertainment. Hence arises an anxious concern to penetrate the secrets of Nature upon an extensive scale ; but let not self-love mislead us to conceive too high an opinion of ourselves, when we consider the various surrounding objects which attract our attention, and deserve admiration.

Thus, if plants do not possess all the moving signs or gestures peculiar to animals, they speak an eloquent language at every period when they renew their existence, and display fresh beauties in tender branches, leaves, or blossoms, proclaiming their respective parents. We need not dwell on the many changes that they undergo. Let it suffice for us to retrace some of the sensations raised by this lovely part of the creation, already divided into thirty thousand classes, and distinguished by the different impressions which they make on our minds.

Do

Do not our wearied eyes find gentle repose, and our troubled hearts derive fresh spirits, from the sight of a soft verdure?

Are we not struck with noble and awful sentiments on treading the footsteps of our forefathers, at an early hour, in that sacred grove whose lofty branches waft a gentle zephyr, while the hollow trunk betrays the marks of ages past; or the more pleasing effusions of a tender heart, in a few poetic lines, carved on the rind by a constant lover, who is now no more?

How pleasant is a botanic garden, where transplanted shrubs of every growth, country, and climate, meet in close ranks, ready to serve us in a thousand ways!

The rose is like a beautiful coquette, who displays her charms to all the world; but the tuberosa appears more coy. The violet and pansy exhibit equally their modesty; the flower-de-luce discovers majesty, while sweetness breathes in the jonquille and jasmine; the pink, tulip, and others, join their fragrant smells to such allurements as tempt us to enjoy the pleasures of a parterre glittering with full-blooming flowers.

What expressions of good-will towards mankind do we not see or conceive in those precious trees, which, waving with the least breath of air, drop or offer us their savoury fruits!

O 4

Some

Some vegetables will weather the storm, without falling, till they are ripe, and fit to be gathered for our refreshment; while many a wholesome plant is doomed to grow unseen, and waste its goodness on the craggy cliff; nay, there is an infinity of others, possessing the most healing qualities, or formed to lull our souls to rest, which are productions either of the highest mountains, or of the deep ocean, deserted vales, lakes, rivers, and mineral springs.

If we reflect, for an instant, on their tender frames, compared with the solid constitutions of living creatures, a striking difference between some of them will be discovered, in a deviation from the general order of Nature; because the stalks or branches of a plant may be separated, without destroying its whole existence; while the stream of life has not one common centre, but animates alike every part of the vegetative system.

Vegetables push their growth by three principal ways,—absorption or sucking up, circulation or motion of the fluid, and nourishment; and by the secondary operations of generation and secretion; for the acts of budding, grafting, transpiring, &c. may be called mere modes of accomplishing the same purpose of vegetating.

Their outward parts exhibit only a fuller display of that interior substance and composition, in which they would probably be found to differ materially  
from

from each other, were such able naturalists as Desfontaines to continue researches after the distinction of sexes, families, and colonies, in the vegetable world. In the mean time, those plants which live more than one year answer the two following descriptions, viz.—

1st. *Monocotyledones* have no distinct concentric sprigs or layers pointed towards the middle: their juice runs through the fibres or filaments, without any ramifications tending to, or from, one point.

2dly. The *Dicotyledones* are of a description opposite to the last, agreeable to the circulating system of the blood and fluids in other animals.

In the first class we reckon the palm, cow-grass, asparagus, fern, the daffodil, moss, &c. &c.

On the other hand, hart-wort, house-leek, Indian fig, and others, with two feminal leaves, are of the second order already described.

These two classes are invariable, and inseparable from every partial variation discovered in the universal system: the first is pliant or tender, and the second of a harder or more durable kind. Thus, at first sight, we distinguish the slender palm-tree from the beech, the fir, the elm, or other trees distinguished by a double feminal leaf. Indeed, so nicely do we find their kindred marked by such Physiognomical signs, that, after a series of years, when only the remains of a trunk are brought to light,

light, there is no doubt or difficulty in ascertaining to which family it belongs.

In observing the palm, we can easily make the additional discovery of its age, from the circular lines with which the surface of the stock is furrowed over, even so far as to affect the whole outward compass.

Besides these natural distinctions, there are accidental differences or difformities to which a plantation is subject from an interruption of growth, such as has fallen within the limits of every man's observations at Paris, as we shall prove by the following case in point:—We may see there, in the King's, or National Garden, a palm considerably shrunk in the middle, from a cause well known, and hereafter explained.

This plant was carried to the Isle of France in a small chest, and shipped off for Europe in the year 1789; but, notwithstanding the care taken of it upon the passage, and afterwards, it continued long in a languishing condition. At last, as the vegetation had been entirely stopped, the stalk grew up some inches, with this difference,—that the second growth was much smaller than the former; and, although these fresh shoots have gradually risen considerably, there still are, and ever will be, visible signs of that contraction; for where this defect appears, the circumference is thirteen inches, twenty-one lower, and eighteen above. This tree grew  
about

about a foot in eight years. The additional height is a regular cylinder, and not so thick as from the contracted part down to the root, because its vegetation was not so much forced in a temperate climate as in the native soil where it first grew, under the torrid zone.

But similar effects cannot possibly proceed from the same causes in trees differently described, which grow up with uniform stalks directed to one central point; so that, however they may vegetate in different countries, the trunk will preserve its primitive form: yet, notwithstanding this affinity between them all, in some respects, if we consider attentively the scattered colonies transplanted all over the globe, the result of our reflections will be a conviction,—that these living creatures (plants) have, like others, an original race, from which they are descended, and a mother-country, best suited to their respective constitutions.

This truth must appear in a stronger light, from a comparative review of such as are called branches of the *natural families of plants*.

Mushrooms, and their relatives, grow regularly upon one scallion, with a stalk terminating in a chapter, or like the top of a pillar. They are all of a spongy substance, porous, cracked, and in pointed blades, growing on putrified wood.

Moss consists of several small leaves, growing separately upon one stem, and blooming in winter.

Instead of pistils, and a stamina of flowers, the male kind of this herb produces nothing but dust. A naturalist has, however, discovered the female with seeds in shells properly preserved.

Fern has generally long leaves, like a plume of feathers, rolled up in a spiral form till they shoot out, being covered with shells or pods, and producing grain on the back part of each leaf, as in the *polypode*, or on particular blades, as in the *osmonde*.

Corn, such as wheat and barley, grows on hollow stalks, each knotted, and bearing a shell for grain, found at the bottom of a covered chalice. They have generally three stamina.

The palm is of a cylindrical form, terminating at top in a tuft of lively-coloured leaves, parting from the centre, and never dropping till others have grown in their place. The plants of this family are *dioiques*, or *monoiques*.

The flower-de-luce has a coloured chalice, or cup, with six rows, and stamina; a pod in three divisions, with alternate leaves on the stalk, forming a sheath at bottom, with shells for the seed opening above.

The daffodil has six stamina, like the lily, but differs from that species, in having the *ovarium* for seed below.

The iris has only three stamina, and is like the daffodil in other essential parts.

Sage

Sage and nettles have square blades ; opposite leaves, with flowers in ringlets ; a cup, or chalice, rising like a saw, with five edges ; four stamina, but only two in a perfect state. Their style resembles a fork with two prongs, and their ripe fruit is without a husk.

Calf's-muzzle, flax, &c. differ from the last-mentioned species, in having the grain in a shell, called the pericardium.

Turnsol, borage, &c. bear alternate leaves, chequered with glands, or rough hair ; stiff chalice, with five deep rows ; a regular chaplet *monopetal*, or formed of one petal ; but in the viperina, or viper's herb, it is irregular, like a wheel, or a funnel. This kind of plant has five stamina, or threads.

The apocina and periwinkle have a five-edged cup, from which a double follicle, or vessel for the seed, shoots out ; with a single wreath of five rows, five stamina, and grain with or without an aigrette, like a heron's cap.

Some of this kind are poisonous, or, at least, unwholesome ; and even the laurel-rose is dangerous.

The three following kinds are of the *composite* order, having several distinct flowers united in a common chalice ; single-leaved garlands fixed upon one ovary, or vessel, for the seed ; bare grain ; five threads, or stamina, united on the sides with alternate leaves, in general ; and other slight shades  
of

of difference, too well known to require a fuller explanation, namely:—

1st. The *femi-floscular*, such as the lettuce and pissabed, which consist of flat flowers in long blades, like demi-flower-work.

2dly. The floscular kind has a perfect flower-work, as we see in the artichoke, heart's-ease, or the trinity.

3dly. Radiant herbs have a complete flower-work in the centre, and demi-fleurons, or blades, like tongues, in the circumference,—just as we find the *virga aurea*, or the golden rod, and the *do-ronica*.

The scabious herb differs only in not having the sides united.

Madder, and the milk-curdler, have stiff blades, with straight or cross leaves; intermediate bars between the buds or untimely shoots; a single-leaved chaplet; four or five stamina; bare fruit, covered with a husk, or buried in the berry.

Parsley, carrots, and others, called *ombellifer*, bear flowers shooting out from their centre like an umbrella; having a five-leaved garland, or chaplet; five stamina, which fall early; two files or rows of grain, which has a small thread in the middle, and separates itself in an upward direction when it has been pressed.

The cabbage is cruciform, with a four-leaved cup, or chalice, decaying; four petals like a cross;  
fix

the stamina, of which two are short; one stile, and one shell for the seed.

Mallows are distinguished by alternate leaves; two petals, with knots or bars at the bottom; single or double chalice, complete; a five-leaved chaplet fixed on the base of a pillar formed by the union of the different threads which compose the stamina; together with one or more stiles, and either several vessels placed in a circular row, each containing one grain, or a single shell holding several grains of seed in separate folds.

These plants are slimy, and their bark is sufficiently hard to serve for making ropes or paper.

The geranium differs from mallows principally in having a hollow tube like a crane's back, opening from the bottom upwards.

Five branches of this species shoot out and form a small star. The cup, or chalice, is plain, with deep rows, five petals, and compact or close threads, or stamina.

The pink has opposite rows of leaves; a solid, longish; and single-leaved chalice; five petals, terminating in a point like a graver, fixed under the pistil; with ten stamina, or branches; seldom four, two, or five stiles; and fruit that becomes a husk opening above. The grain sticks on a pyramid in the middle of the shell.

Apples

Apples and pears are of that numerous class which produces the most pleasant fruit, partly distinguished by kernels.

They have alternate leaves, with a single tuft divided into several parts; having five petals of flowers, with from twenty to a hundred branches; and several small twigs, all concentrating to give these trees a most showy appearance in full bloom.

They produce nothing but such salutary food as a child may safely eat, and soon know from any other, by looking at the trees thus described.

Pulse, peas, and beans, bear alternate leaves, with a cup of one piece, and an irregular crown of various flowers, resembling a butterfly.

It is on account of such a likeness, that gardeners call the upper petal, the standard; those on the sides, wings; and the lower ones, flankers. The latter is sometimes but a single leaf, and often found to be formed by two united petals.

The shells frequently grow together, so as to be only separated with difficulty.

The willow, filbert, &c. consist of trees or shrubs, which produce alternate leaves shooting out, or concealed in pods; with male flowers like the collet of a ring; and female ones, separate by themselves, or united in circles about the same stalk that generally produces both sexes.

We have already had occasion to mention that class of plants which yield fruit like a cone, or a sugar-

sugar-loaf;—such as the pine and the fir, whose apples are familiar to every body.

Their leaves are alternate, shooting out at once, or penetrating through a pod, and yielding flowers, of which each sex, by turns, embellishes the different twigs from one season to another, in continual clusters, and never-ceasing succession.

Thus have we reviewed many glorious works, without wishing to trespass on any reader's patience.

But, however concise or imperfect these sketches may be, let us hope that they will enable a young student to form a just idea of all animals, by examining their faces, manners, complexion, and disposition, while, with reverence, he considers those wise views of Providence for which they were designed.

With these impressions, aspiring to know more, the liberal-minded scholar will then conclude by saying—Such is the boasted privilege of man; the creature endowed with the greatest gifts of Heaven, reason, speech, and such superior intellects as render him the sovereign lord on earth!

FINIS.

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